



Navy Medical newsletter



August 1970

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Credits: All pictures are Official U.S. Navy Photographs unless otherwise indicated.

Cover photograph reveals Aerospace Experimental Physiologist at work. An important member of the Medical Allied Sciences Section of the Medical Service Corps, the Aerospace Experimental Physiologist conducts both laboratory and in-flight investigations.

Page 2 photograph, courtesy of the Naval Medical School, NNMCC, Bethesda, Md., shows VADM G. M. Davis, MC, USN, Surgeon General of the Navy (left), welcoming the Honorable John H. Chafee, Secretary of the Navy (right), to the Surgeon General's Conference held May 20–22, 1970, at NNMCC.

Back cover photo of LT M. T. Barco, DC, USNR, and all other Dentcap pictures, were taken by CPL Al Wiegand, USMC. We are indebted to CAPT C. B. Simmons, USMC, PAO, Force Logistic Command Headquarters, FPO San Francisco, for these fine photographs.



from the Chief

The Bureau of Medicine and Surgery was established by Act of Congress approved 31 August 1842. At its inception, the total staff of the Bureau consisted of five individuals: the Chief of the Bureau, Surgeon William Paul Crillon Barton; an Assistant Surgeon; and three civilians—two clerks and a messenger. Through subsequent years of growth and development, BUMED has expanded to include a Deputy Chief, and five Assistant Chiefs who direct complex systems in Personnel and Professional Operations, Planning and Logistics, Aerospace Medicine, Dentistry, and Research and Military Medical Specialties.

The changing order of medical practice, research and military technology places new demands upon the Navy Medical Department. Enlarging the scope of its primary mission, the care of the sick and injured of the Navy in peace and war, medical support has extended to include families and dependents of Navy men and officers, native populations of the mandated islands of the Pacific, emergency care of civilian workmen in naval shore establishments, and humanitarian assistance at home or in foreign countries in which naval medical personnel are available.

During recent months, important anniversaries have been cited in the Medical Newsletter commemorating the establishment of integral components of the Navy Medical Department: March 3, 1871, the Medical Corps; May 13, 1908, the Nurse Corps; June 17, 1898, the Hospital Corps; August 4, 1947, the Medical Service Corps; and August 22, 1912, the Dental Corps. Of diverse ethnic, geographical and professional persuasions, our predecessors have fashioned a dynamic organization, ever responsive to the countless demands that have been made, and shall yet be made, upon it. By the wedding of youthful energy with the practicality of seasoned veterans, and the wisdom of dedicated counselors, Navy Medicine has forged through the years of growth and expansion. Each Corps has proven its value, sometimes heroically, not only in dramatic periods of dire need, but over the long haul as well, in the routine performance of less tangible tasks so essential to the responsive delivery of health care. Many of our innovations, conceived and developed in a military setting, have been found feasible and have been instituted in civilian medical situations.

In addition to the unique military contingencies which concern Navy Medicine, we share with our civilian brethren the inherent problems of health care delivery and personnel shortage. The paramedical services have attained importance which has never been more keenly realized. As we enter the exciting and challenging era that lies ahead, the Navy Medical Department shall proceed in an unprecedented spirit of cooperation, confident in the knowledge that the whole is equal to the excellence of its parts.

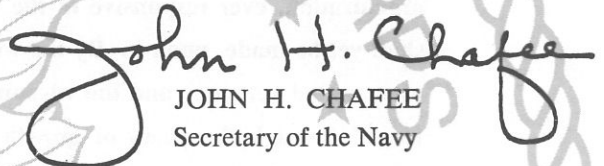


TO THE OFFICERS OF THE MEDICAL SERVICE CORPS

It gives me great pleasure to extend to all of you my congratulations and best wishes on this twenty-third anniversary of the establishment of the Medical Service Corps of the U.S. Navy.

Your enviable record of accomplishments fully justifies the pride and esprit de corps which are so evident among all of the officers of your Corps. Since the prevention of disease and the care of the sick merit the finest capabilities, you should all feel an intense gratification that your many and varied skills have been and are such a vital part of these functions. I have every confidence that you will continue to discharge your responsibilities and meet new challenges with the determination and ability you have so ably demonstrated in the past.

Please accept my warmest personal regards and best wishes for a HAPPY BIRTHDAY.




JOHN H. CHAFEE
Secretary of the Navy

I take great pride and pleasure in extending my sincere congratulations to all of you on this twenty-third anniversary of the establishment of the Navy Medical Service Corps.

The men and women of your Corps have earned an outstanding reputation for their diversified talents, devotion to duty and spirit of service which have contributed so much to the accomplishment of the mission of the Navy Medical Department. In every endeavor to which you have devoted yourselves, you have rendered outstanding service, both individually and collectively. It is, therefore, a pleasure to convey to you my appreciation and that of the entire Medical Department, and I do this with complete confidence in your continuing loyalty and devotion to duty.

To each and every one of you, wherever you may be serving, I extend my warmest personal regards and wish you a HAPPY BIRTHDAY.



G. M. DAVIS
Vice Admiral, MC, USN
Surgeon General

On the Twenty-Third Anniversary of the Navy Medical Service Corps, it is with pleasure that I extend greetings to each of you from the Naval Dental Corps.

Your Corps has rendered outstanding support to the Medical Department of the Navy and to the personnel of the Navy and Marine Corps. I am especially pleased and proud of the many fine contributions made by those Medical Service Corps officers who have served with the Dental Corps.

Congratulations and best wishes for your continued success.



E. C. RAFFETTO
Rear Admiral, DC, USN

It is with pride and pleasure that I take this opportunity to extend my personal greetings to all of you on this Twenty-Third Anniversary of the establishment of the Navy Medical Service Corps.

An anniversary is an appropriate occasion to reflect back on past accomplishments, and the officers of our Corps may justifiably do so. It is also an occasion to look to the future, and this we may do with complete confidence in our competence and ability to discharge our increasing responsibilities in full measure. The calibre and professional competence of the officers who comprise our Corps fully justifies this confidence.

To each and every one of you a happy and joyful HAPPY BIRTHDAY!



E. L. VAN LANDINGHAM, JR.
Captain, MSC, USN

It is with genuine pleasure that I extend, on behalf of the Navy Nurse Corps, heartfelt greetings on the occasion of your Twenty-third anniversary.

Throughout your history, your Corps has given the world an example of persistent purpose united with great dedication and ambition, and again this past year your members have added another chapter of outstanding professional achievement to the history of the Medical Department of the United States Navy.

Heartiest congratulations on your past accomplishments and best wishes for a rewarding and fruitful future.



ALENE B. DUERK
Captain, NC, USN

HISTORY OF THE MEDICAL SERVICE CORPS

Background. The Act of 29 August 1916, which established the Hospital Corps of the Navy and authorized the no longer existing ratings of hospital apprentice and pharmacist mate, also authorized the appointment of Warrant and Chief Warrant Officers, with the titles of Pharmacist and Chief Pharmacist, in such numbers as the President might determine necessary to meet the needs of the service. The small cadre of Warrant Officers appointed under the authority of this legislation was the forerunner to the Medical Service Corps as it exists today. During World War I, the number of Warrant Officers in the Hospital Corps increased significantly and sixty-five Pharmacists and Chief Pharmacists were given temporary commissions in the Medical Corps of the Navy. Although a few of these officers retained their temporary commissions following the termination of World War I, the majority reverted to their prior warrant officer grade.

The need for an all officer category composed of individuals trained in the administrative, professional, and scientific specialties traditionally allied with medicine had long been recognized. However, no positive action to formally establish such a category was taken prior to World War II. The Act of 24 July 1941, as amended, abolished permanent promotions for the duration of the War, and authorized the temporary appointment in the Regular Navy of Warrant and Chief Warrant Officers and Chief and First Class Petty Officers. Under the authority granted by this legislation, 1429 officers were given temporary appointments in the Hospital Corps during World War II. In addition, a total of 845 pharmacists, optometrists, and other individuals with training in specialties and sciences allied to medicine and dentistry were given temporary appointments as Naval Reserve officers with the H(S) specialty designator. The vital role played by these two groups of officers in the accomplishment of the war-time mission of the Navy Medical Department further emphasized the need for a permanent officer category to complement and supplement the existing Officer Corps then comprising the Medical Department.

Establishment. The enactment of the Army-Navy Medical Service Corps Act in 1947 formally established the Navy Medical Service Corps. This legislation marked a significant change in the composition of the Navy Medical Department and provided the statutory authority to satisfy the longstanding need for a permanent commissioned Corps of specialists to

complement the existing Medical Department officer categories. The original legislation provided for the Corps to be comprised of four sections: the Supply and Administration Section, the Medical Allied Sciences Section, the Optometry Section, and the Pharmacy Section. The Act further authorized the Secretary of the Navy to create such other sections, as necessary, to meet the needs of the service. As a result of this authority, the Women's Specialists Section was established in 1952 and in 1965 was retitled as the Medical Specialist Section to permit the appointment of male officers in the specialties included within the section. Also as a result of such authority, the Podiatry Section was established in 1953. In 1954, legislation was enacted to provide for the office of the Chief of the Medical Service Corps and gave authority to the Secretary of the Navy to appoint an officer to the position. In 1956, the Congress clarified a section of the original Army-Navy Medical Service Corps Act which authorizes Medical Service Corps officers to command activities appropriate to the Corps. In 1969 the Supply and Administration Section was redesignated as the Health Care Administration Section.

Composition. The Medical Service Corps contains a commissioned rank structure of ensign through captain, inclusive. The Corps composition is also delineated into sections, and specialties within sections. The specialties within sections are flexible and have been changed and revised by administrative actions as necessary to meet the needs of the service. It may also be noted that officers are not appointed to permanently serve in any particular section or specialty but may be reclassified by the Bureau of Medicine and Surgery as their qualifications or interests change, or as necessary, to meet current requirements for officers in certain specialties. Many Navy Medical Service Corps officers are fully qualified to serve in several specialties and in some cases within two sections of the Corps. The present Corps composition by Section and Specialty is as follows:

Health Care Administration Section

Medical Allied Science Section—composed of officers classified within the following specialties:

Bacteriology	Industrial Hygiene
Biochemistry	Medical Technology
Biophysics	Microbiology
Chemistry	Parasitology
Entomology	Pharmacy
Environmental Health	Physics

Physiology (general
and aerospace)
Psychology (Clinical,
Experimental,
and Aerospace)
Radiation Health

Radiation Biology
Radiation Chemistry
Radiation Physics
Virology
Serology

Medical Specialist Section—composed of officers of the following specialties:

- Dietetics
Physical Therapy
Occupational Therapy
Optometry Section
Pharmacy Section
Podiatry Section

Strength. The following tabulation indicates the total active duty strength trend in the Medical Service Corps throughout recent years as well as the growth in the senior grades:



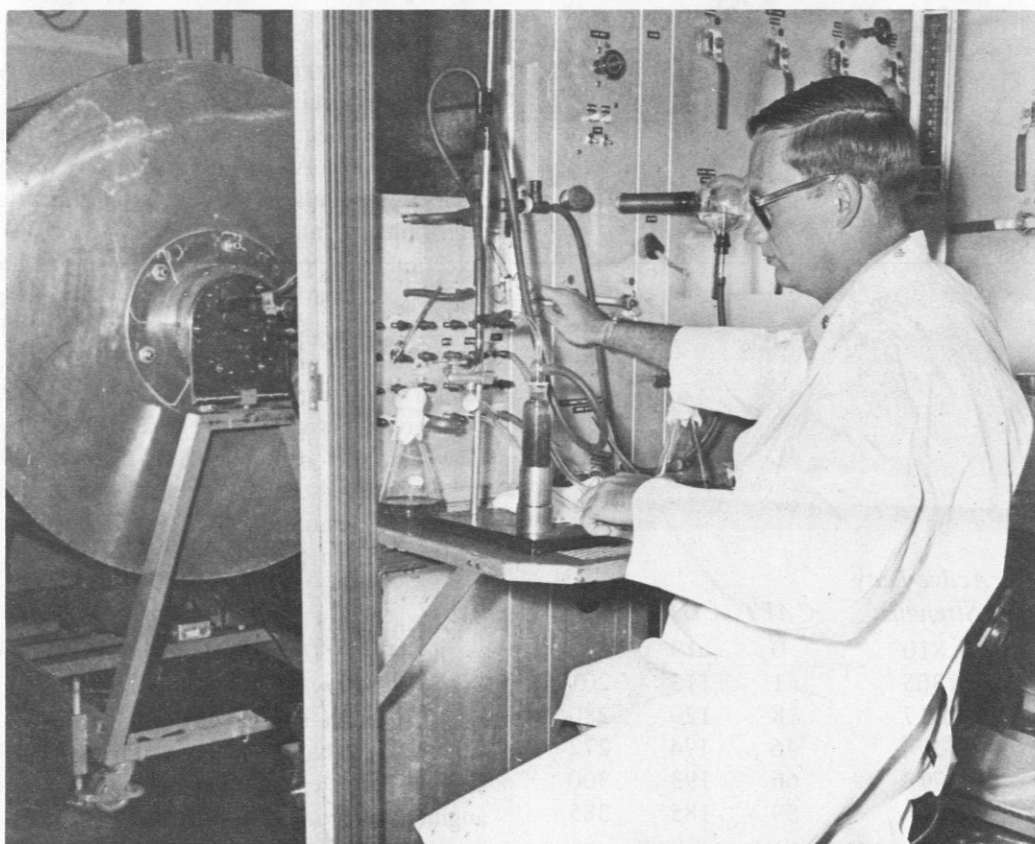
End FY	<i>*Active Duty Strength</i>	CAPT	CDR	LCDR
1950	810	0	19	160
1955	1365	1	113	201
1960	1317	18	120	280
1965	1374	46	174	272
1969	1718	66	193	300
1970	1604	59	185	385

* Includes Medical and Dental Warrant Officers



Procurement: The following procurement programs provide the sources of input into the Medical Service Corps.

Annual Inservice Procurement Program—provides the major source of input into the Health Care Administration Section and a minor input source into other sections. Applicants under this program must meet rigid standards of education and prior military performance; make a qualifying score on an Officer Selection Test; pass a comprehensive written professional examination, and survive a comprehensive screening process conducted by a Naval Examining Board. Prior to 1960, officers appointed in the Health Care Administration Section from this source were given permanent Regular Navy appointments. However, this resulted in an unacceptable level of Regular Navy strength within the overall Corps and, therefore, permitted little or no opportunity for augmentation into the Regular Navy of Naval Reserve officers. Therefore in fiscal years 1960 and 1961 the majority of applicants selected for appointment in the Health Care Administration Section were issued temporary appointments and since Fiscal Year 1962 all such appointments have been temporary. This action has reduced the overall MSC, USN strength sufficiently to permit equal opportunity for augmentation into the Regular Navy for both temporary and Naval Reserve Officers.



Direct Appointment Program—This program now provides the major source of procurement into the Medical Allied Science, Pharmacy, and Optometry Sections as well as a minor input source for the Health Care Administration and Medical Specialist Sections. Applicants so appointed are commissioned prior to entry on active duty.

Student Professional Training Program—This is the major source of input into the Medical Specialist Section. Under this program, Physical Therapy and Occupational Therapy students are appointed as early as 12 months prior to completing their professional training, and dietetic students are appointed up to 24 months prior to completing their training. Students so appointed receive active duty pay and allowances while completing their training but must defray all costs of their education.

Officer Candidate School—Formerly a major input source for all sections, at present OCS provides only a very minor input source for the Health Care Administration and Medical Allied Science Sections. Applicants selected under this program must complete a 16-week course at OCS prior to appointment.

Medical Service Corps Student (Ensign, 1935, Inactive) Program—This is a new program initiated in June 1968, which provides for the appointment of students enrolled in, or accepted into a graduate training program which will qualify them for appointment in the Health Care Administration, Medical Allied Science and Optometry Sections. This program provides for the appointment of such students as

Naval Reserve officers with the 1935 designator and their deferral from active duty for a maximum of 24 months to permit them to complete their education. Students appointed under this program receive no financial benefits until they accept a superseding appointment in the Medical Service Corps and commence active duty.

Training. The Medical Service Corps maintains a broad training program in which opportunities are available to all officers on active duty to further their education with financial support from the Navy. Attendance is authorized in both service and civilian institutions, on a full-time or part-time basis. The Naval School of Health Care Administration is affiliated with The George Washington University and provides a comprehensive 10-month course in health care administration for Health Care Administration Section officers. Officers in other sections are provided opportunities for training, usually at the graduate level, at various accredited civilian institutions. Officers are also encouraged to attend and participate in appropriate workshops, seminars, conventions, and meetings to enable them to enhance their professional abilities and to keep abreast of the constantly changing requirements of military medicine.

Utilization. Officers of the Medical Service Corps are assigned in all geographical areas wherever medical research, operational or training responsibilities exist. These areas of assignment include naval hospitals, research activities, preventive medicine units, fleet marine forces and various operating units and military installations throughout the world.☞

(Continued from p. 37)

tip. No immobilization was done. The patient tolerated the procedure well, and on the first postoperative day immediate oral physiotherapy in the form of opening to at least 3 cm. was started. Because of pain, the patient had to be vigorously encouraged and assisted. By the third postoperative day the patient's complaints were actually minimal during the performance of these exercises. One week postoperatively there were no voiced complaints. A regular diet was easily maintained. On the tenth postoperative

day the patient was discharged from the hospital, to be followed as an outpatient. An 18-month follow-up of this patient has revealed no recurrence of ankylosis. A 3 cm. anterior opening and a full range of jaw motion have been maintained throughout this period.

The consensus was that the patient had suffered from a disseminated, hematogenously spread osteomyelitis affecting the right temporomandibular joint.☞

TO THE OFFICERS OF THE DENTAL CORPS

The remarkable progress of the Navy Dental Corps since its establishment on 22 August, 1912 has been achieved through the dedicated efforts of dental officers who, like you, chose to serve their country by serving the men who follow the sea.

In the last 58 years Navy dentists have served all over the world—ashore and afloat—in peace and war—and their performance has always reflected great credit upon their profession and their Corps. Today this record of valiant service rests safely in your hands. With your continued support I know that the professional excellence of the care you provide the men and women of the Navy and Marine Corps will become even greater as you meet the challenges and the opportunities of a new decade.

On your 58th anniversary—wherever you may be—please accept my sincere thanks for your outstanding performance and my best wishes for a Happy Birthday.



G. M. DAVIS
Vice Admiral, MC USN
Surgeon General

FIFTY-EIGHTH ANNIVERSARY OF THE NAVAL DENTAL CORPS

To all Naval Dental officers, I extend hearty best wishes on the Fifty-eighth Anniversary of the Naval Dental Corps on 22 August 1970.

I take this opportunity to express my pride and satisfaction with the progress that has been attained. The cooperative spirit that pervades our Corps attests to its viability and high morale. By individual and collective efforts, increased professional competence has been achieved. Continued emphasis in research and dental education opportunities will insure further growth toward professional excellence.

New goals and objectives will bring new challenges and responsibilities to each of us. As we resolutely move forward to ever greater opportunities of service, let us do so in the spirit of the great traditions established by dedicated dental officers, past and present.

On this Anniversary, let us look ahead to the future in our continuing efforts to provide the most effective dental health care to the personnel of the Navy and Marine Corps.

Happy Birthday!



E. C. RAFFETTO
Rear Admiral, DC, USN
Assistant Chief of the Bureau of
Medicine and Surgery (Dentistry)
and Chief, Dental Division

FRENCH DENTISTS AND WRITERS TOUR NAVAL DENTAL RESEARCH INSTITUTE AT GREAT LAKES

By JO1 Bob Martens, USN. Photographs by PH1 David Garrison, USN.

A group of 31 French dentists, administrators, and writers, together with technical writers from Belgium and the Netherlands, visited the Naval Dental Research Institute at the Great Lakes Naval Base, April 28. The Great Lakes visit was just one stop in a week long tour of leading dental research facilities in the United States. The purpose of their visit was to familiarize themselves with fluoridation methods utilized in American dentistry, water fluoridation and applications of fluoride compounds in various types of solutions, gels, sprays, and dentifrices. Technical writers accompanied the tour to gather information on the latest techniques and procedures used to apply fluoride to patients' teeth.

Dr. Henry Klein, a retired U.S. Public Health officer who makes his home in Paris, was the Ameri-

can escort and host for the visitors. Dr. Klein was one of the pioneers in adopting the fluoridation process in the United States. He is attempting to create a greater awareness of American fluoridation processes in Europe.

The tour, sponsored by the French League for Children's Dental Health included stops at the Forsyth Dental Institute in Boston; Great Lakes; the University of Indiana School of Preventative Dentistry, Indianapolis; the American Dental Association in Chicago; and U.S. Public Health Service, National Institute of Dentistry in Washington, D.C. The Europeans arrived in Boston, April 26, and were scheduled to return to Europe, May 3.

The stop at the Naval Research Institute was second on the week long tour. The first had been at the



Dr. Arthur Held (right) is welcomed to the Naval Dental Research Institute by CAPT Kirk C. Hoerman, Commanding Officer of the unit. Miss Joyce Jones, tour director, introduces Dr. Held who was the interpreter for the visiting Europeans. Dr. Held is a Professor of Medicine at the University of Geneva in Switzerland.





Forsyth Institute, Boston, where chemical and biological effects of fluorides had been explained. A fluoride application demonstration on patients awaited the visitors at Great Lakes where they were warmly greeted by CAPT Kirk C. Hoerman, Commanding Officer of the Naval Dental Research Institute, and CAPT C.A. Ostrum, Director of the Dental Department, Administrative Command, Great Lakes.

Presentations on the NDRI's special clinical program in which every Navy recruit receives periodic applications of stannous fluoride in solution form, and information on the relationship between water fluoridation and decay-free Navy recruits were given. The visitors were later given an opportunity to observe 20 sailors who demonstrated the procedures employed in the Naval Service. CDR Lee A. Counsell, Preventive Dentistry officer, gave detailed instructions to the gathered students. The subjects were given an apron, a mirror, a special dental kit, and were asked to stand before a sink.

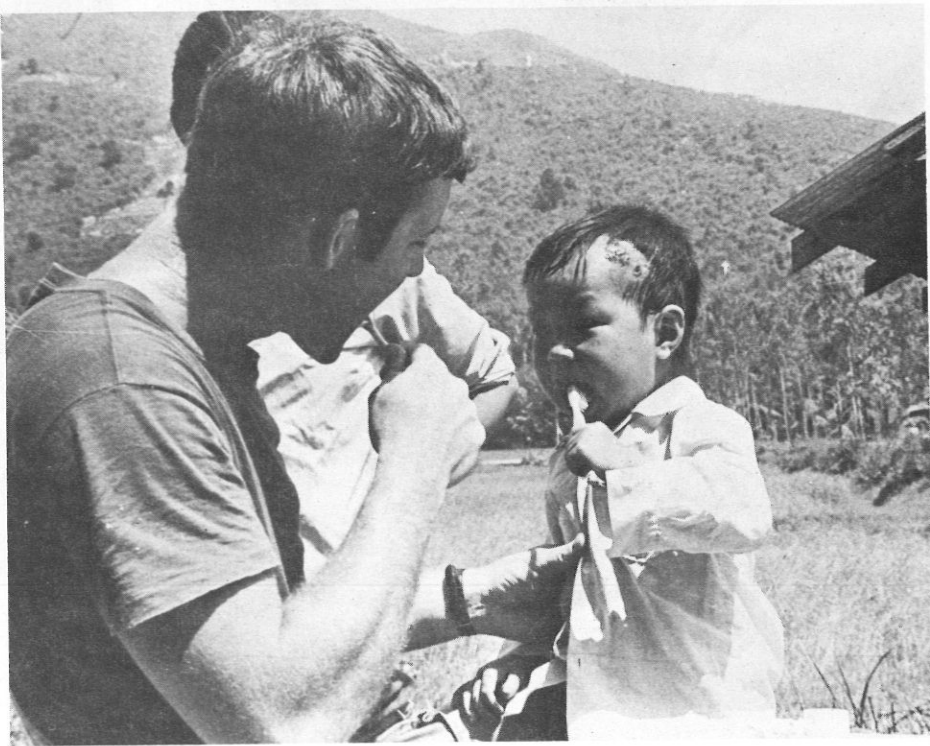
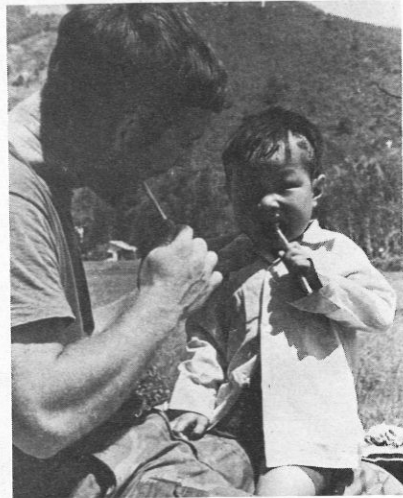
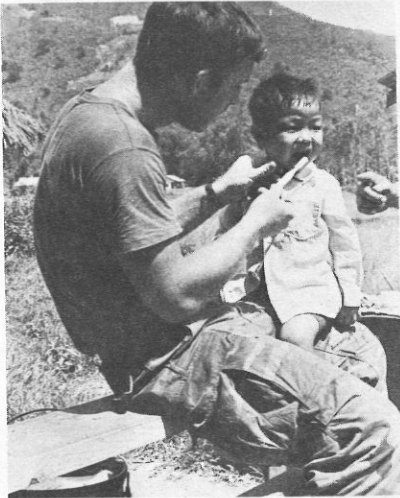
Kits contained a tube of stannous fluoride toothpaste, a toothbrush, and several food dye tablets. The subject had to chew a tablet, rinse his mouth with water, and check his teeth in the mirror to see where red spots appeared. Red spots indicated those portions of the mouth where food deposits had built up and would have to be brushed again. After each

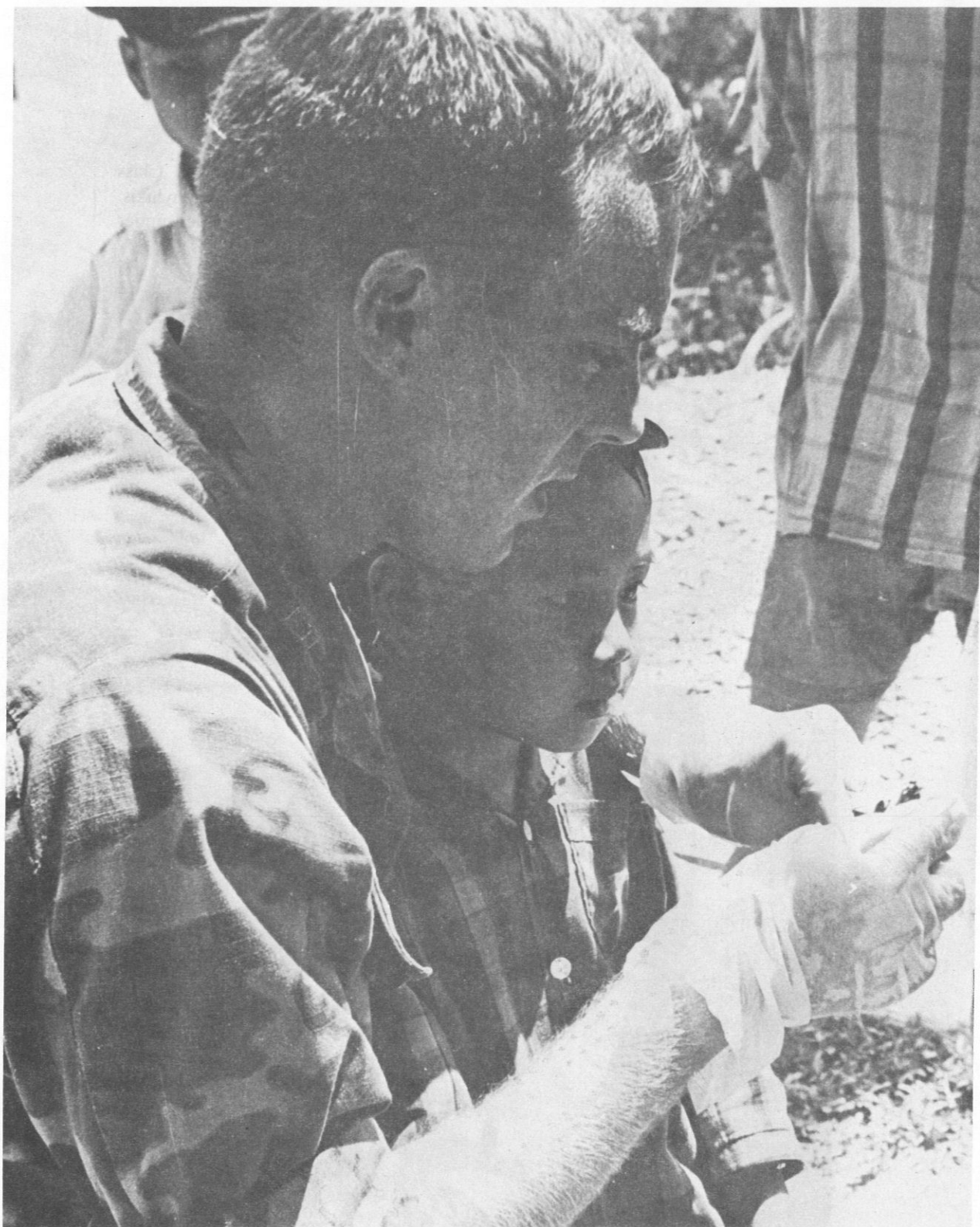
inspection, the student had to chew an additional tablet pinpointing the telltale deposits. The procedure normally takes from 8–10 minutes of brushing, rinsing and checking in the mirror. Once the mouth was free from red spots, the student proceeded to a dental chair where a dental hygienist or Navy dental technician applied fluoride directly to the tooth enamel, facilitated by the thorough cleansing which preceded fluoride application. The visiting dentists and writers were delighted and impressed with the American techniques and method of application.

Notable among the visiting Europeans were: Mrs. Colette Boulton, wife of the French Secretary for the Ministry of Health; Dr. Albert Delaunay, Chief of the Applied Pathology Department, Pasteur Institute, Paris, and President of the French League for Children's Dental Health; and Miss Odette Cunin, President of the French National Council for Dental Health and Vice President of the French Academy of Dentistry; Mr. Andre Besombes, President of the French Dental Academy, Professor at the Dental School of Paris University and the General Secretary of the League; and Professor Backer Dirks, Professor, Microbiology Laboratory, University of Utrecht, Netherlands. Dr. Arthur Held, Professor of Medicine, Geneva University, Geneva, Switzerland, was interpreter for the group.—PAO, Ninth Naval District, Great Lakes, Ill. 🌿

MEANWHILE

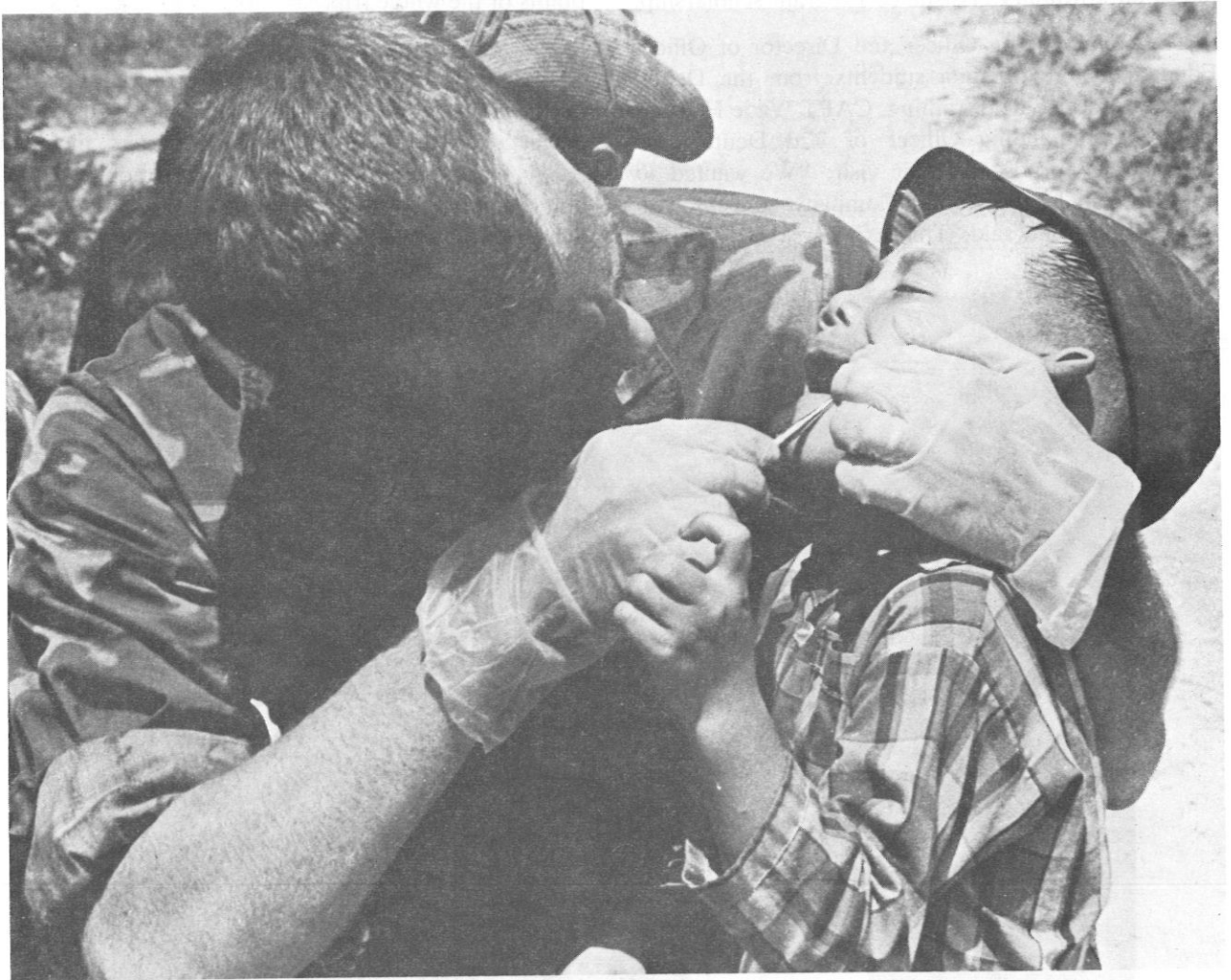
In An Ngai Tay Hamlet, Hoa Thanh Village, Dental Technician 3rd Class Louis ("Skip") F. Snedigar conducts his own class in the art of dental prophylaxis. Professional services, modest facilities and much heart are regularly provided under the auspices of Dental Civic Action Patrol (DENTCAP).





LABOR OF LOVE

Regimental Dentist LT M. Thomas Barco, DC, USNR, is captured on film while hard at work in An Ngai Tay Hamlet, Hoa Thanh Village, by photographer CPL Wiegand, USMC.



LANDING ZONE GOOSE

By JOSN John Pruitt

"Open wide, buddy, real wide!" Such an order normally heard in a dental office, was heard recently in a tent at Landing Zone Goose. But the tent was a dental office—field office of 22d Dental Company, Force Troops, from May 7 to 14. During three of those days it was the classroom for 34 officers of the Navy Postgraduate Dental School at Bethesda, Md.

The officers who visited from Bethesda included two captains, six commanders and 26 lieutenant commanders. Dr. Tjiang K. Liem, Director of the Naval Dental Institute in Djakarta, Indonesia, also participated in the exercise. Dr. Liem is visiting the United States on a Military Assistance Program scholarship.

The Commanding Officer and Director of Officer Education were the first students from the Dental School to receive field training. CAPT Wade H. Hagerman, Commanding Officer of 22d Dental, explained the purpose of their visit: "We wanted to expose them to the Dental Company concept with the Marines," he said. This exposure will give the

dentists a better understanding of their patients should they be assigned with Marines.

In addition to practicing dentistry under field conditions, the Navy officers toured the 1st Infantry Training Regiment. They fired several of the weapons demonstrated for them. They were able to fire an M-79 40mm grenade launcher and they watched numerous demonstrations, including the firing of an M-72 anti-tank weapon and an infiltration exercise. "I thoroughly enjoyed that," CDR Robert W. Koch said, after firing an M-16. "It sure doesn't kick like the old ones used to. I think that was one of the high points of the whole trip."

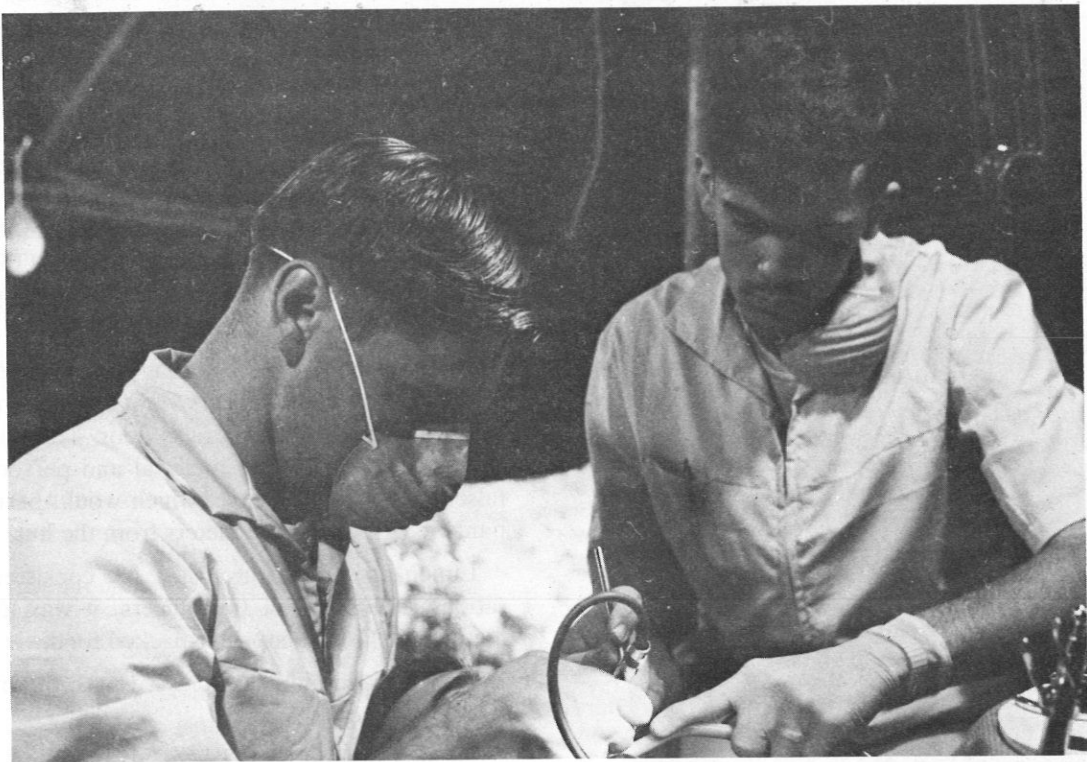
The services possible in the field ranged from a simple filling to dental surgery. "We can do anything out here we can do in a dental office," a 22d Dental officer declared. The Field Headquarters included X-ray facilities, a prosthetic clinic, a mobile dental unit complete with air-conditioning, two six-chair dental tents and complete living quarters.



MAJ MacPherson and Dr. Liem chat before an ITR briefing.



CDR Koch is instructed on the M-16 rifle by Pvt Ramon J. Dreswek.



LT Richard Gleinn, 22d Dental Company, fills a tooth, assisted by CPL Elvin R. DeHart.



CAPT Ellis takes aim with an M-79 grenade launcher.



During an orientation lecture at ITR, MAJ R. T. MacPherson, Operations and Training Officer, told dentists, "I've visited many dentists, but this is the first time many dentists have visited me. I hope your visit is more pleasant than mine."

CAPT Frank N. Ellis, Director of Officer Education at the Naval Dental School in Bethesda, was impressed with Camp Lejeune's cleanliness. "Marines really keep this place just the way nature left it," he remarked, after touring several of the ITR ranges. "There isn't a single can or discarded wrapper along the road."

A simulated Viet Cong village was included in the ITR tour. There the officers viewed a hut with double walls and another with a false floor. The double wall would permit hiding of material and personnel. The false floor covered a cave, which would permit occupants to exit about five meters from the hut.

Lunch on Wednesday, May 13, consisted of "C" rations. For some of the officers, it was a first encounter with the compactly-packed food.

CAPT Hagerman was pleased with the overall effect of the exercise.

"It was number one," he said, "the best."—Joint PAO, Camp Lejeune, N. Carolina. ☸

CLOSE-UP PHOTOGRAPHY

By CDR L. G. Dickson, MC, USN, Naval Medical Research Institute,
National Naval Medical Center, Bethesda, Maryland 20014.

Close-up photography is important in medicine for documentation of many observations. It is defined for purposes of this article as photography producing images from 1/20th to the same size as the original. In other words, this is photography of an object from 20 inches to one inch in length in such a way that it approximately fills the long dimension of the usual 35 mm negative or slide. Macrophotography is photography of an object at 1–40 magnifications and is the subject of a later article.

The range of 1/20th to 1 magnification is an important one accounting for about 70% of clinical medical photography and about 90% of gross anatomic pathologic photography. It approximately covers specimens from the size of a whole lung to many photographs of lesions of the eye, mouth or individual digits. It also includes photography of such other subjects as charts, graphs and X-rays.

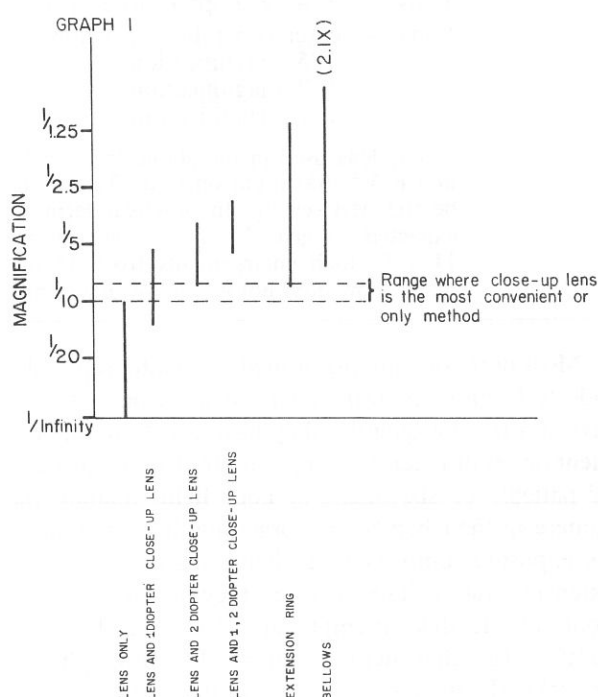
Close-up photography is simpler than macrophotography and facility may be developed in only a very few attempts to produce illustrations for publications or lectures. Some lenses produced for close-up photography are sold as "macro lenses" but are capable of work only in the close-up range. This confusion of terminology should be remembered and not allowed to confuse efforts at understanding and practice of close-up photography.

The following discussion, suggestions and calculations are based on the popular double frame 35 mm (24 x 36 mm) film format. They may be applied to other film sizes if adjustments are made for differences in film size.

As a camera comes closer to an object, the image of that object increases in size on the film. As the subject-to-camera distance decreases and the lens is focused to produce a sharp image, the lens mount usually can be seen to get longer. Certain lenses are made to provide an uninterrupted focusing range from infinity to 1:1 (subject size: image size). These are especially adaptable to convenient close-up pho-

tography but are not necessary. As any camera approaches the subject, a point is reached where the lens no longer may be focused. At this point the forward movement of the focusing element is stopped.

Three things may be done to increase image size: (1) insert extension rings between lens and camera body, (2) insert a bellows or focusing tube between lens and camera body, and (3) attach bi-convex "close-up" lenses to the front of the camera lens. Graph I shows ranges where these methods are used. Advantages and disadvantages of these three solutions are shown in Tables 1 and 2. An additional consideration is that bellows and extension tubes are sometimes thick enough that there is a range of camera-to-object distances within which an image cannot be brought into focus. This is because the thickness of the bellows or thinnest extension ring moves the lens too far forward. This problem usually occurs in focusing objects only slightly closer to the camera than the basic camera and lens system will handle alone. In this range of distance between object and lens there are two solutions: (1) use a close-up lens and (2) use a separate combined male-female lens extender which is available for some cameras.



From the Bureau of Medicine and Surgery, Navy Department, Research Task No. MR005.20-0203B.

The opinions or assertions contained herein are the private ones of the author and are not to be construed as official or reflecting the views of the Navy Department or the Naval service at large.

References to commercial supplies and sources are included for convenience of readers and may not be construed to imply product endorsement by the Navy Department or the Naval service at large.

TABLE I

Feature	Extension Tube	Bellows, etc.	Close-up Lens
1. Cost	\$10-30	\$10-50	\$1-4 each; usually 2 needed
2. Ratios possible with ease	to 1:1	to 1:1 of bellows may fail to produce ratios such as 1:15-1:20	to 1:1
3. Continuously variable	Usually may require changing tube combinations	Always	Usually may require changing lens combinations
4. Interchangeable lenses required	Yes	Yes	No
5. Convenience	Fair to poor, exposure meter automation may be lost	Fair—exposure meter automation probably lost	Good to excellent
6. Loss or resolution	Usually not measurable	Usually not measurable	Varies from not measurable to moderate depending on quality of close-up lens
7. Exposure correction calculation required	Yes Not required for behind the lens meters	Yes Not required for behind the lens meters	No

TABLE II

Comparison of Resolution	Center Resolution
Lens alone	80 lines/mm
Lens + 1 diopter close-up lens	70 lines/mm
Lens + 2 diopter close-up lens	65 lines/mm
Lens + 1 + 2 diopter close-up lens	50 lines/mm
Lens + extension tubes or bellows at:	
1/5 magnification	70 lines/mm
1/2 magnification	60 lines/mm
1/1 magnification	45 lines/mm

The lens used in the above test is a high resolution copy lens of 55 mm focal length and F 3.5 maximum opening. Test shots were at a setting of F 8 which had proven to be the best setting. In practical terms, resolution of better than 40 lines/mm can be expected to give 35 mm slides suitable for small auditorium projection and sharp 11 x 14 inch enlargements from 35 mm size negatives. The line resolving power of many films does not exceed 40 lines/mm.

Most users of cameras in medical photography decide to bring their own camera to work one day and give it a try. Frequently, they have a bellows attachment or set of extension rings and try to take pictures of patients or specimens in poor light, holding the camera in their hands and forgetting the requirement for exposure compensation when using the bellows or extension tubes. The pictures they get at first are poor and further attempts are discouraged. Many people forget that there is a qualified photographer in or available to hospitals, dispensaries, ships or re-

search commands. These photographers are trained and experienced in the kinds of photography needed by physicians, dentists, and veterinarians. They are willing and able actually to perform whatever work is required. We all would probably be better off if we relied upon their expertise and did not try to do our own work. These professionals are, however, very indulgent and cooperative whenever a doctor arrives with his new single lens reflex with behind-the-lens meter. I now mention this kind of equipment because this is the most commonly bought and, if we limit our

thoughts to single lens reflex cameras, we may forget about the parallax problems of viewfinder or twin lens reflex cameras.

The following recommendations are made as the result of personal experience and may be altered by the personal preferences of others.

CAMERA: *Any single lens reflex.* A behind-the-lens meter is a considerable convenience; this may be of the spot or full field averaging type.

LENS: Ideally, a lens built for close-up photography with extended focusing range. The focal length should be 50–135 mm. If it is 80–135 mm it should be a short barrel variety for added convenience when and if bellows are used.

ILLUMINATION:

Reflected Light: Most arrangements make use of copying stands such as that shown in Figure I. These are inexpensive. They are convenient to use and usually come equipped with two or four photo-flood lamps for illumination of the base.

Reflections may be a problem when photographing certain specimens. These highlights may obscure important details. Such highlights may be reduced or eliminated by (1) partly drying the specimen surface with a towel or damp sponge, (2) placing the specimen in a deep pan, filling the pan with water and photographing the specimen under the water and (3) placing polarizing filters over both the lens and light sources. Backgrounds can be small, black, white or colored sheets of Formica or similar product.

Transmitted Light: An X-ray viewbox is the most convenient first source of transillumination. The color of light can be changed by inserting colored sheets of celluloid or cellophane between the light and the specimen. Even opaque objects often are photographed on such lighted boxes. This provides a background of a pleasant color and appearance. After gaining experience with the X-ray viewer, many users build or buy a similar source of light tailored to their specific needs.

FILMS: As indicated in Table II, the final results are dependent on both lens resolving power and the ability of the film to record fine detail. A useful rule is to remember that the slower the ASA speed of a photographic emulsion the better the resolving power of that emulsion. Almost all scientific photography which I do is under conditions with good light and therefore I use the slowest emulsions I can find. This produces better resolution. Recommended products are shown in the Appendix. Until recently I used color transparency film to produce positive slides of

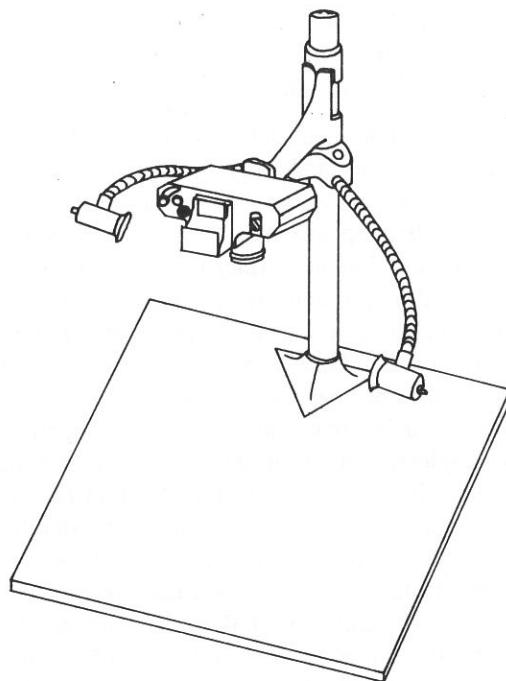


FIGURE I

charts, graphs and X-rays even when the graphs or other materials were in black and white. This probably still is a good and reasonably inexpensive method if only 1–6 such items need to be photographed and the camera contains color film. For larger numbers of reproductions I have switched to a black and white film and reversal processing. This produces 35 mm projection slides of X-rays which do not have the blue cast so often seen when color film is used. When cost-accounted, it is less expensive to use this black and white film. The cost, when bulk black and white film is purchased, is about 1/10th that of color and the results are preferable to most observers.

The choice between outdoor color film and that for indoor use is a personal one. Most of my close-up photography now is done under photoflood (3400° K) illumination so I use indoor film. When fortunate enough to have a copying stand available with strobe or daylight temperature (5600° K) halogen light sources, I use daylight film.

APPENDIX

Product Selection Suggestions:

1. **Camera:** Any single lens reflex with a built-in exposure meter and interchangeable lenses is suitable. For several years the GSA contract supplier has provided Nikon products and these have proven popular in Naval hospitals. Personally, I find the Nikorex as

useful as the Nikon model F with various Photomic^(R) finders. It costs less when available at GSA price and performs well.

2. *Lenses:* The usual lens provided with purchase of a camera has a focal length of about 50 mm. This lens is entirely adequate because it may easily be used with close-up auxiliary lenses, extension tubes or bellows attachment. "Macro" lenses are available from several manufacturers. In spite of the "macro" designation, these are usually intended for close-up photography. The Nikon 55 mm F 3.5 Micro-Nikkor Auto is only one example of such lenses. This lens provides focusing from infinity to 1/2 magnification in its simplest form. It is delivered with a matched extension tube allowing 1/1 magnification (life size). This extension tube allows the automatic diaphragm to continue to function when it is attached—a convenience of many but not all similar systems. This is a useful all around lens and is recommended as a substitute for the basic lens if the F 3.5 opening is sufficient for all uses for a camera. Some photographers prefer 85–135 mm lenses with short barrels for close-up photography. In use these must always be attached to a bellows or focusing extension tube. For most purposes I consider them luxuries. They do have a place in surgical photography since their greater working distance allows the photographer to work farther from the surgical field than he can with a 50 mm lens.

3. *Camera/Lens Combinations:* The Startek and Kodak Ektographic Visualmaker kits are simple, reliable systems for close-up photography. Each is less flexible since they provide ranges of format size which are relatively narrow. This is not often a problem with close-up photography of clinical specimens but may be limiting when copying charts, graphs, etc. If maximum convenience is the goal these are recommended but each is quite expensive for the quality of camera provided.

4. *Film: A. Color:*

(1) Kodachrome II, Daylight, ASA-25

Features—High resolution, medium contrast, good for flesh tones, erythematous lesions; for photomicrography of hematoxylin and eosin sections add didymium filter to light path; allowable exposure error without excessive deterioration of transparency: ± 0.5 ($\pm 50\%$) f stop.

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	K-135-20	\$1.20
36	K-135-36	\$1.70

Processing: Use Kodak color PK-20 or PK-36 mailers.

(2) Kodachrome II Professional, Type A, ASA-40

Features—Same as Kodachrome II

Daylight, except for photoflood illumination. Some suppliers are unfamiliar with this film and may say it doesn't exist. Its added speed is an advantage. Don't bother buying this unless you use photoflood illumination. The color correction filter required for use in daylight or with 5600°K lamps effectively reduces the ASA value to 25 and is therefore no advantage over the daylight form of this film.

Form Available

Exposure	Stock No.	Approximate GSA Price
36	KPA-135-36	\$1.80

Processing: Same as above.

(3) Kodachrome-X, Daylight, ASA-64

Features—High resolution, medium-high contrast.

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	KX-135-20	\$1.20
36	KX-135-36	\$1.70

(4) Kodak Ekachrome-X, Daylight, ASA-64

Features—Medium high resolution and contrast. This is a popular film. Its major advantage is that it may be processed by the user.

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	EX-135-20	\$1.30
36	EX-135-36	\$1.80

Processing: Same as above or by Kodak process E-4 by user.

(5) Kodak Ektachrome High Speed, Daylight, ASA-160

Features—Medium resolution, medium contrast. Also available as tungsten balanced emulsion (Type B, ASA-125).

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	EH-135-20	\$1.60
36	EH-135-36	\$2.15
20 (Type B)	EHB-135-20	\$1.60
36 (Type B)	EHB-135-36	\$2.15

Processing: Same as above or by Kodak process E-4 by user.

B. Black and White:

(1) Kodak Panatomic X, ASA-32

Features—Extremely fine grain panchromatic, medium-high contrast. Allowable exposure error without excessive deterioration of image: ± 2 f stops.

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	FX-135-20	\$.50
36	FX-135-36	\$.70

This is also available as a 100 foot roll for users loading their own magazines. Order stock No. FX-402; Cost \$5.20.

(2) Kodak Plus-X Pan, ASA-125

Features—Fine grain panchromatic, medium high contrast.

Forms Available

Exposure	Stock No.	Approximate GSA Price
20	PX-135-20	\$.50
36	PX-135-36	\$.70

This is also available as a 100 foot roll for users loading their own magazines. Order Stock No. PX402; Cost: \$5.20.

Either of the above films may be processed to produce positive transparencies by using Kodak direct positive film developing materials. For this reversal, change the ASA ratings. For Panatomic-X an ASA equivalent of 50 is good and for Plus-X one of 160 is advised. ☼

ONE HUNDRED CASES OF TRAUMATIC RUPTURE OF THE SPLEEN

LTCDR Robert W. Slate, MC, USN; CAPT Lindsay C. Getzen, MC, USN;
and CAPT Robert C. Laning, MC, USN, San Diego, Calif.
Arch Surg 99(4):498-500, October 1969.

During the eight-year period from July 1, 1960, through June 30, 1968, 308 splenectomies were done at the Naval Hospital, San Diego, Calif. One hundred of these were performed in the treatment of splenic or parasplenic diseases, that is, hemapoietic, inflammatory, or malignant. One hundred eight were performed following iatrogenic splenic injury for parasplenic disease. Iatrogenic injury usually occurred during surgical procedures about the esophageal hiatus: hernioplasty, vagotomy with pyloroplasty, or vagotomy with hemigastrectomy. One hundred splenectomies were performed upon patients who had sustained a traumatic splenic injury. It is this last group that we wish to present in detail.

Material

Twenty-two of the patients who sustained splenic trauma were 15 years of age or younger. The etiological forces producing the trauma in this age group are as follows:

Falls (over 3 feet)	4
(less than 3 feet)	5
Auto accidents	8
Other blunt trauma	5
Penetrating trauma	0

A fall, usually from a height less than 3 feet, was the most common etiological force in this age group. However, auto accidents produced nearly the same number of injuries.

Various etiological forces encountered in the 78 patients whose age was sixteen years or older are:

Auto accidents	37
Fights	19
Falls	9
Contact Sports	2
Other blunt trauma	6
Penetrating trauma	5

Auto accidents produced the largest number of patients' injuries in this age group.

Results

Thirty-three percent of our patients were diagnosed upon initial presentation on the basis of physical signs and history.

Diagnosis on initial examination	33%
Diagnosis after repeated examinations, complete blood cell count (CBC), and films by 48 hours	54%
Diagnosis based on observation over 48 hours or on special examinations	13%

The presenting clinical picture was one of a varying degree of hypovolemic shock plus left upper quadrant abdominal pain and fullness. In addition, there was

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From the Naval Hospital, San Diego, Calif.
The opinions or assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the Navy Department.
Reprint requests to Naval Hospital, San Diego, Calif. 92134 (Capt Getzen).

usually pain in the left shoulder that was aggravated by respirations. Another 54% of these patients were diagnosed within 48 hours of their trauma by repeated physical and laboratory examination such as serial blood counts and X-ray films of the chest and abdomen. Therefore, in 87% of the cases the diagnosis was made within 48 hours of the traumatic injury, based on the findings of physical examinations and the available diagnostic laboratory and X-ray studies. The remaining 13% of the cases were difficult to diagnose and required more than 48 hours to establish the diagnosis. We found no particular diagnostic examination to be of specific unequivocal benefit in establishing the diagnosis of these patients.

Carbon dioxide distension of the stomach, upper gastrointestinal series, intravenously administered pyelography, and repeated films of the abdomen were used to assist in the diagnosis of these patients on an individual basis. Paracentesis facilitated the diagnosis in four of these cases. Widening of the space between the colon and the peritoneal fat line facilitated the diagnosis in four others.

Sixty-seven percent of the patients were observed for variable periods of time preoperatively, either in order to prepare them for surgery or to establish the diagnosis. In these individuals serial hematocrits and white blood cell counts (WBC) were utilized for following them. The WBC was elevated about 15,000/cu mm in only 45% of these patients. Therefore, elevation in WBC was a poor indicator of splenic injury in our series. Serial hematocrit determinations obtained during the preoperative period were reviewed. The hematocrits did not reflect the intra-abdominal blood loss which occurred during the first 24 hours after trauma in 72% of the patients. In fact, in 18% of those patients who were not transfused, there was an increase in the hematocrit despite an average 800-cc intra-abdominal blood loss estimated by the operating surgeon upon entering the abdominal cavity. The hematocrit appears to be more reliable in reflecting the intra-abdominal blood loss in the second 24-hour period than in the first 24-hour period. The hematocrit appears to parallel the blood loss in a reciprocal relationship during the third 24-hour period. This information has led us to doubt the reliability of the hematocrit as an adequate indicator of the degree of intra-abdominal bleeding during the first 24 hours following splenic trauma.

Comment

We are of the opinion that this observed discrepancy in the hematocrit can be explained by the sequestration of fluid in the peritoneal cavity from the

extravascular space. Such a sequestration occurring at the same time as, or immediately after, an acute hemorrhage into the peritoneal cavity would conceal the blood loss as depicted by the hematocrit. To add support to this opinion, we obtained the hematocrit determinations on the intraperitoneal blood found at surgery. As the Figure depicts, the longer the time interval between trauma and surgical intervention the lower the hematocrit of the intra-abdominal blood through the second 24-hour period. This tends to support the impression that a progressive sequestration occurs during the first 48 hours following trauma. During this time period intravascular-extravascular fluid equilibrium is established and the hematocrit drop reflects the blood loss.

Clinically there appears to be a decrease in total blood volume as noted by the pulse and the blood pressure response despite the unchanging hematocrits. In our patients 66% exhibited clinical signs and symptoms of hypovolemia.

Normal blood pressure and pulse	34
Positive tilt test	29
Hypovolemic shock	37

When the degree of hypovolemic shock in an individual patient is compared with the amount of intra-abdominal blood encountered upon entering the abdomen, the correlation is excellent.

The posterior approach to the splenic pedicle, described by Balfour in 1916 and reemphasized by Dumphy in 1946, was the technique primarily used in performing the splenectomies in these patients. Incisions used in these patients are as follows:

Midline	39
Paramedian	25
Subcostal	19
Thoracoabdominal	5
Transverse	3
Others	9

We have found the midline approach to be the most useful because it affords an easy access to other organs, allowing a rapid and thorough exploration and control of the hemorrhage. If required, additional organ surgery is facilitated either through this incision or through an extension of this incision.

The volume of blood found upon entering the abdomen varied from a few drops to 3,000 cc. The volume appears to be predictable on the basis of the degree of persistent hypovolemic shock and was found to correlate well with the type of splenic injury:

Linear fracture
Capsule tear from adhesions

Small stellate fracture
 Large stellate fracture
 Puncture wound
 Subcapsular hematoma

The overall average blood volume in the peritoneal cavity was 800 cc. Of interest is that in patients with multiple organ injuries, the average was also 800 cc of intra-abdominal blood.

Thirty-eight of our patients had additional intra-abdominal injuries. The other organs or areas injured are as follows:

Retroperitoneal hematoma	11
Large bowel laceration	8
Gastric or small bowel laceration	6
Liver or biliary laceration	5
Diaphragm laceration	5
Renal injury	3

Retroperitoneal hematomas were the most common injury associated with splenic injuries. The most common additional organ injury was a laceration of the colon. Most of our postoperative complications occurred in this group.

Forty-four of our patients were drained. Thirty-seven of these patients were drained with a soft rubber drain. The remaining seven were drained with a double-lumen sump tube. In 75 of these patients a nasogastric tube was used, and this tube was usually removed by the second postoperative day. The usual course was one of gradual improvement to regular diet. By one week, 90% of the patients were receiving a regular diet. The mean was four days to a regular diet intake.

If those cases with injuries other than to the spleen are excluded, the death rate is 3.22%. The two deaths which occurred in patients with splenic injuries only were due to thromboembolic phenomena, pulmonary emboli. Both occurred during the third postoperative week.

The complications which were encountered representing a 29% complication rate are as follows:

Pleural effusion (left)	6
Atelectasis	11

Ileus	11
Subphrenic abscess	1
Total	29%

The complications correlate most closely with a lack of drainage of the splenic bed. Recently we have tended to rely on draining more frequently and using a sump-type drain following splenectomy for traumatic splenic injury.

Summary

Of 308 splenectomies performed at the Naval Hospital, San Diego, Calif., over an eight-year period, 100 were performed in treatment of traumatic splenic injuries. Falling resulted in the greatest number of injuries in patients below the age of 15, whereas auto accidents were the etiological force for the injury in the adult group.

A diagnosis was established in 87% of the cases within 48 hours on the basis of repeated physical examination and available laboratory and radiographic studies. Thirteen percent of these cases required special diagnostic examinations, but no single special diagnostic examination was found to be specific for diagnosing a ruptured spleen in this group.

Serial WBC and hematocrits were found to be unreliable diagnostic aids. The hematocrit was found to be especially deceiving during the first 24-hour period following trauma, and a theoretical explanation is proposed to explain why the hematocrits are unreliable during this time period in splenic trauma.

Midline incision was most commonly used, and an average of 800 cc of intra-abdominal blood was found at surgery.

Thirty-eight patients had additional organ injuries. In this group of patients the majority of postoperative complications occurred. In patients in whom only a splenic injury was found, there were two postoperative deaths, both due to thromboembolic phenomena. Postoperative complications were more prevalent when the splenic bed was not drained than when drains were used. Lastly, a double-lumen sump-type of drain appears to be superior to a soft rubber drain.

(The figure and references may be seen in the original article.)

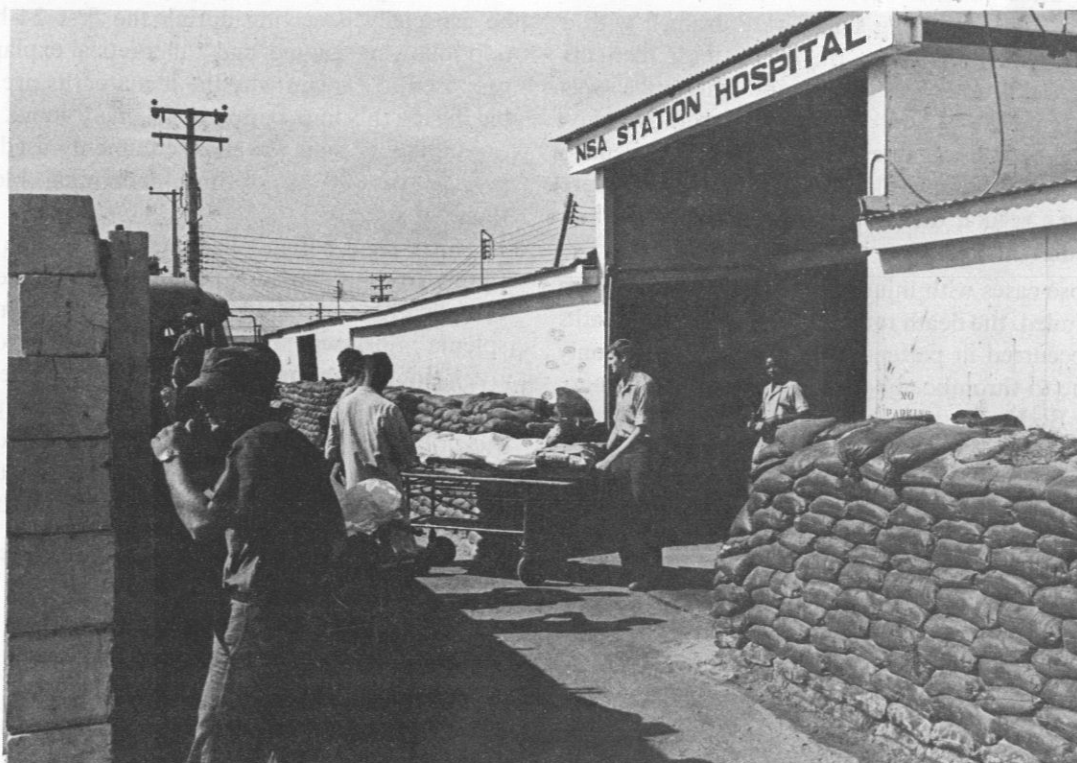
NSA HOSPITAL, DANANG, VIETNAM

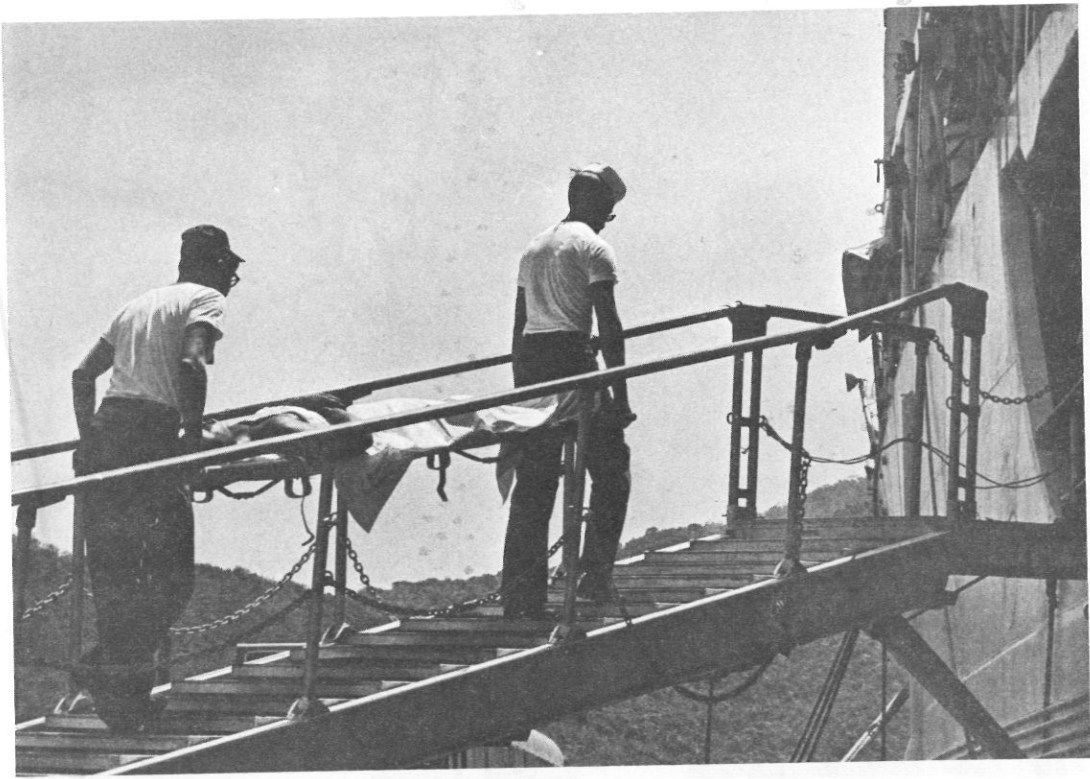
By LCDR G. D. Despiegler, MSC, USN.

After more than four years of providing medical care for American and Free World Forces casualties, Naval Support Activity Hospital in DaNang, Vietnam, was closed on May 15, 1970. The largest combat casualty hospital in Vietnam, the NSA Hospital officially opened with 60 beds on January 17, 1966 and rapidly expanded to 400 beds by July 1966. During 1969 the hospital reached its maximum authorized bed capacity of 600, with an expansion capacity of 720 beds. The hospital staff included more than 700 doctors, nurses, hospital corpsmen and dental technicians; over 200 nonmedical personnel augmented the medical staff. Hospital facilities included

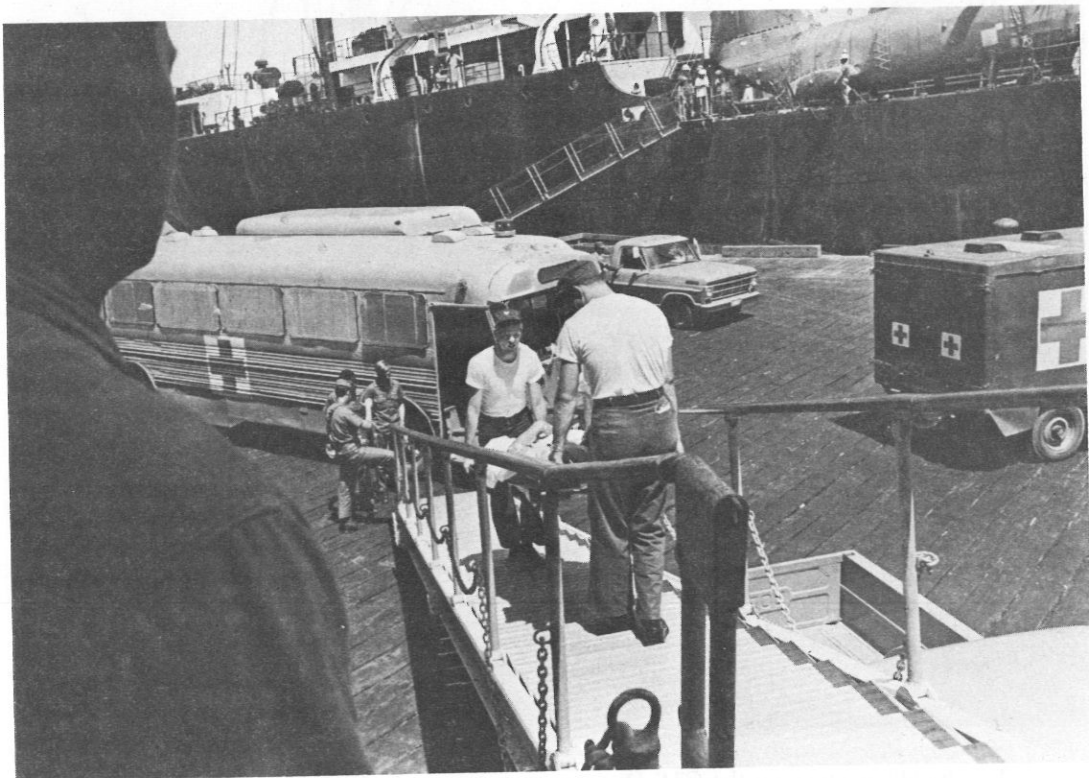
a helicopter landing pad, Preventive Medicine Unit, Frozen Blood Bank, Medical Research Unit, X-ray Department, Ophthalmology, Surgery, Urology, Orthopedics, Neurosurgery, Internal Medicine, Dental, Medical Library and Recreation sections.

Only minutes away by helicopter from some of the most formidable battlefields, the NSA Hospital admitted 51,601 patients and performed more than 36,425 operations from July 1967 to April 1970. Eighteen thousand five patients were admitted as a direct result of combat. Over 67,000 patients were admitted since 1966.





Patients left NSA Hospital on May 12, 1970; all inpatients were transferred to the Naval Hospital in USS SANCTUARY.

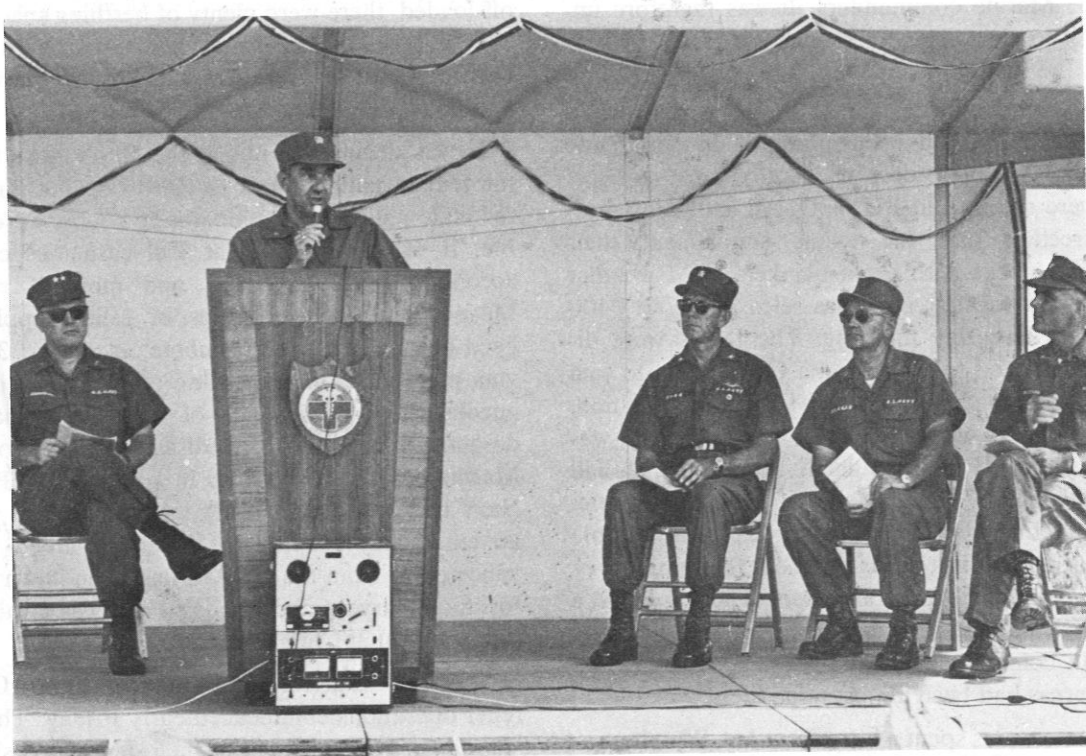





Camp Tien Sha Dispensary, AUS, opened on May 17, 1970. HMCS King and HN Bryte, USN, cut the ribbon marking the formal opening of CTS Dispensary.



Two buildings make up the CTS Dispensary, successor to NSA Hospital.



CAPT N. P. Kitrinos, MC, USN, Senior Medical Officer, delivered the Farewell Address at Inactivation of NSA Hospital Ceremony on May 14, 1970. (Left to right): RADM Adamson, CAPT M. A. Horn, Chaplain Berger and Chaplain Wishard. 

NAVY SURGICAL TEAMS ASSIST IN PERU EARTHQUAKE DISASTER RELIEF

By CAPT J. H. Stover, Jr., MC, USN. — Code 49, BuMed.

At 1000, on Friday, June 5, CAPT R. G. Ireland, MC, USN phoned BUMED from his desk in OPNAV to alert the Bureau that serious consideration was being given to dispatching a Navy relief force to Peru. The USS GUAM, an amphibious assault ship (helicopter carrier) on station in the Caribbean might be deployed to the disaster area to participate in recovery efforts. With roads impassable, our Ambassador had indicated that helicopters and other support which the GUAM could provide were sorely needed. A few minutes later, CAPT P. G. Bamberg, MC, USN, CINCLANT, Assistant Fleet Surgeon, acting in RADM Stoecklein's absence, alerted the Bureau to a possible requirement for surgical teams. By noon, CAPT Ireland advised that Navy participation was moving from the possible to the probable category.

Alerting calls were placed to several naval hospi-

tals since the number of teams required had not been determined. By mid-afternoon, the CINCLANT Fleet Surgeon's office notified the Bureau that they felt three teams would be needed. Naval hospitals at San Diego, Portsmouth, Va. and Camp Lejeune were selected to furnish the teams. CAPT Ireland indicated that in view of the bad weather, low temperatures, and remoteness of some of the areas that there was a good possibility medical relief teams might be needed ashore to operate independently in the rugged terrain. Ambassador Belcher had indicated specifically that the Callejon de Huaylas, a high mountain valley, would be the probable target area. The Bureau felt that corpsmen trained for Marine Corps duty would be ideal for the mission. It was recommended to CAPT Bamberg that the corpsmen attached to the Marine battalion aboard the GUAM be made available; ready agreement came from the re-

sponsible Marine commanders. It was therefore unnecessary to alert casualty evacuation teams to supplement the surgical teams.

By late evening of June 5, plans to dispatch a Navy relief force had been approved by the White House and formal orders to deploy three surgical teams were received at BUMED. An activating message directing that the teams supplement their mount-out blocks with extra blankets, cold weather gear, typhoid vaccine, etc., was released about 0400 on June 6, Saturday morning. The teams were directed to proceed to the Panama Canal Zone to join the GUAM at Balboa by 0500 Monday. In addition, the Naval Field Medical Research Laboratory was directed to deploy the modular X-ray unit which had been developed by Naval Medical Research Institute. At the time the activating message was released, little solid information was available about the numbers or types of casualties to be expected. The earthquake which had occurred 5 days earlier had virtually wiped out communication and reconnaissance in the disaster areas had been almost impossible.

The three teams spent a busy Saturday. Warehousemen were recalled to break out additional stores of blankets, extra fluids, etc. Each hospital made direct arrangements with NAVAIRLANT for transportation. The San Diego team, under CDR M. Neugebauer, MC, USN, added some 10,000 lbs. of equipment to their normal 6,000 lb. mount-out block and were airborne by midnight on Saturday. The team from Lejeune, under CDR J. D. Tolmie, MC, USN, included LCDR J. E. Ives, MC, USNR, who had spent several years of his medical career in Mexico City. CDR B. F. Gibbs, MC, USN, who headed the Portsmouth team, was also fluent in Spanish. By Sunday evening, June 7th, all three teams had arrived in Balboa, C.Z.

At Balboa, mountains of relief supplies were accumulating. Crews worked around the clock to load them aboard GUAM. When the ship sailed early Tuesday morning, June 8th, the entire hangar deck was occupied by relief materials. The teams and their corpsmen (ten to each team) had boarded Monday afternoon; the ship arrived off Chimbote three days later.

During the transit period, CAPT Alan Dougall, USN, Commodore of the Amphibious Squadron, organized a disaster relief council, with CDR Neugebauer as the medical member. All Spanish speaking personnel on the ship were mustered as interpreters. Twelve physicians were available, and almost 60 corpsmen. Since most of the Marine troops had been

off-loaded, there were plenty of berthing spaces available to serve as emergency hospital spaces. All embarked personnel were given cholera, typhus, plague and smallpox inoculations.

It was decided to utilize the ship's hospital ward for female patients and to use troop berthing areas for male patients. Two operating rooms were available. It was estimated that 300 casualties could be accommodated with ease, and more if required. Meanwhile, massive dumps of relief supplies had been accumulating in Chimbote, as well as 30 Peruvian medical teams consisting of two physicians and ancillary personnel. Each of these teams had been designated for airlift into a disaster site as soon as the Marine helicopters arrived. In addition, the Peruvian Navy had brought an AKA into the area to serve as an emergency hospital for local casualties. An advance party from the GUAM had been flown to Peru for initial surveys and briefings, and was awaiting the ship's arrival at Chimbote.

The GUAM arrived late Thursday, June 10th, and relief operations commenced early Friday. The Peruvian teams were airlifted to their designated sites and when possible, were accompanied by Marine communication teams. Doctors Neugebauer and Gibbs surveyed Chimbote and found the city 50-60% destroyed. One hospital was completely destroyed; another hospital had been without water and power for five days but had just received emergency generators. They were impressed with the relatively few injured to be seen—despite the massive destruction. This same impression was reinforced on subsequent visits to isolated villages inland. The death toll was high, but the number of injured requiring definitive care was proportionately much lower than they expected.

Helicopters returning from insertion of the Peruvian teams began to arrive with casualties; the first were two pregnant women, at term, with pelvic fractures! Luckily for the teams, a Peace Corps nurse, Miss Renee Rowanko joined the shipboard medical group at this time, and was immediately assigned responsibilities for the female and pediatrics spaces.

The majority of casualties received were, as expected, orthopedic in nature—untreated open compound fractures, crush injuries, etc. A Chilean Army field hospital at Casua evacuated its remaining patients to GUAM for transfer to Peruvian facilities. LCDR J. C. Elsasser, MC, USNR, of the Portsmouth team was impressed with the physical stamina of the evacuees from the mountain area—and the relatively low level of infections in wounds which were by this time, 10 or 11 days old. (Continued on p. 36)

THE GASTROENTEROLOGIST CORNER—A CLOSER LOOK AT EXAMINATION OF THE ABDOMEN

By CDR Donald O. Castell, MC, USN, Head, Gastrointestinal Branch,
Medical Service, Naval Hospital, Philadelphia, Pennsylvania 19145.

All too often in clinical practice the results of abdominal examination are expressed primarily as a statement reporting the presence or absence of a palpable liver, spleen, or other abdominal mass, or the presence of tenderness. This is unfortunate, since a more careful examination of the abdomen often provides extremely useful information relative to the possible presence of disease of the liver in particular. This manuscript will be directed primarily toward the techniques of percussion and auscultation of the abdomen, and their relative importance in the diagnoses of abnormalities of the liver or spleen.

The technique of percussion, and its potential usefulness in clinical medicine, was first introduced in the eighteenth century by Leopold Auenbrugger in

Vienna. Based upon studies performed on the chest cavity of cadavers, the technique and original descriptions by Auenbrugger have certainly become popularized and quite useful in the physical diagnoses of chest lesions. There seems to be a relative lack of appreciation however for the potential value of percussion in abdominal examination.

"The Spleen Percussion Sign"

The potential value of percussion in evaluating spleen size first became apparent during experience with patients who had infectious mononucleosis with progressive changes in spleen size. It was noted that gentle percussion over the splenic region provided a useful tool in following the regression of this organ

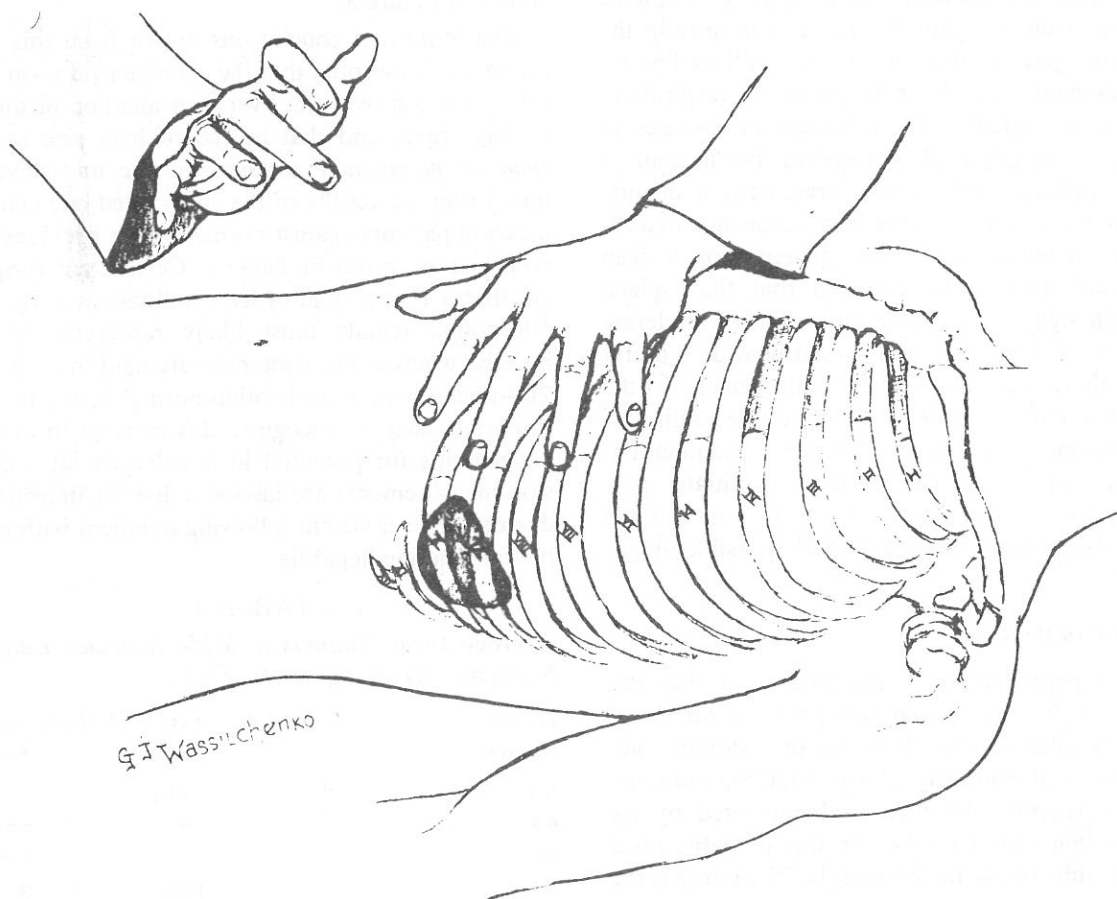


Figure 1.—The method of eliciting the spleen percussion sign is demonstrated. Percussion is performed with the left middle finger placed in the lowest intercostal space in the left anterior axillary line. A positive sign occurs when the percussion note changes from resonance to dullness with full inspiration. The approximate position of the normal spleen is shown.

back to its normal size. In normal individuals percussion in the lowest interspace in the left anterior axillary line would usually produce a definite resonant note that persisted throughout the full phase of inspiration. However, in patients with previous palpable splenomegaly, one could often detect a change in the resonant percussion note to dullness as the patient took a deep inspiration. It was felt that this physical finding was the result of descent of a moderately enlarged, although often not palpable, spleen underneath the percussing finger. The position of the normal spleen is located on the posterolateral wall of the abdominal cavity adjacent to the ninth through the eleventh ribs,¹ and its relation to the position of the middle finger of the left hand for eliciting the percussion sign is illustrated in Figure 1.

In an attempt to verify the potential usefulness of this physical finding a study was later performed at the Naval Hospital, Great Lakes, Ill., using radioisotope scanning to determine the actual spleen size. The results of the study nicely confirmed the fact that in the normal individual without evidence of splenic enlargement on scanning, the percussion note in the lowest interspace in the left anterior axillary line remains resonant throughout the phases of respiration. However, in patients with a variety of diseases in which splenomegaly is likely to occur, but in none of whom a palpable spleen was presented, a definite change in the percussion note from resonance to dullness was demonstrated as the patient took a deep inspiration.² This study indicated that the "spleen percussion sign" is a reliable indication of moderate degrees of splenomegaly, and should provide a useful tool for the detection of splenic enlargement in the patient in whom the spleen has not attained sufficient size to become palpable on abdominal examination. Over the years since the study was initially performed, this test has proven to be of considerable value in assessment of patients with possible splenomegaly.

Percussion of the Liver

It is in percussion over the liver area that this modality of physical examination probably attains its greatest usefulness in the diagnosis of abdominal abnormalities. Unfortunately, all too often the examination of a patient's abdomen is documented by the statement that "the liver border was palpable three finger-breadths below the rib margin." Not only is the use of finger-breadths to be deplored as has recently been observed by Chalmers,³ because of the great variation in the size of examiners' fingers, but the reported length of liver palpable below the rib margin

indicates little or nothing about the probable size of this organ. Without the use of percussion, the examiner is unable to define the upper border of the liver, and therefore is unable to determine its total size. In a recent publication definite standards have been established for size of the liver on percussion in normal individuals.⁴ It is of interest that liver dullness in the mid-clavicular line was noted to show a significant correlation with the body size of an individual. This is not surprising since autopsy data have revealed that liver and all other organ weights correlate very well with individual body size.⁵ In this study the mean span of liver dullness in the mid-clavicular line for females was 7 cm, and the corresponding figure for males was 10½ cm. More importantly, the span of liver dullness for either sex showed a striking correlation with the height of the patient, or more specifically with the total lean body mass of the individual. The relation of liver dullness in the mid-clavicular line to height is shown in Figure 2, and the relation of liver dullness to estimated lean body mass is shown in Figure 3.

The important conclusions drawn from this study are that it is essential that the examiner perform careful percussion over the liver in evaluation of the size of this organ, and that he record liver size as *total span of percussable dullness* in the mid-clavicular line. From the results of the study cited one can then measure patients against normal values previously established as shown in Table 1. Certainly it is apparent that a 10 cm span of liver dullness in a five-foot, 100-pound female most likely represents hepatomegaly, whereas the same measurement in a six-foot, 200-pound male is well within normal limits. It seems important that we recognize this concept in evaluating patients for potential liver enlargement. Percussion measurements are also of value for detection of decreasing liver size in following a patient with possible fulminating hepatitis.

TABLE I

*Average Liver Dullness in Mid-Clavicular Line For Normals According to Height**

Height (inches)	Liver Dullness (cm)	
	Male	Female
60	8¼	6
63	9	6¾
66	9¾	7½
69	10¼	8
72	11	8¾
75	11¾	9½

*From Castell, et al (Ref #4).

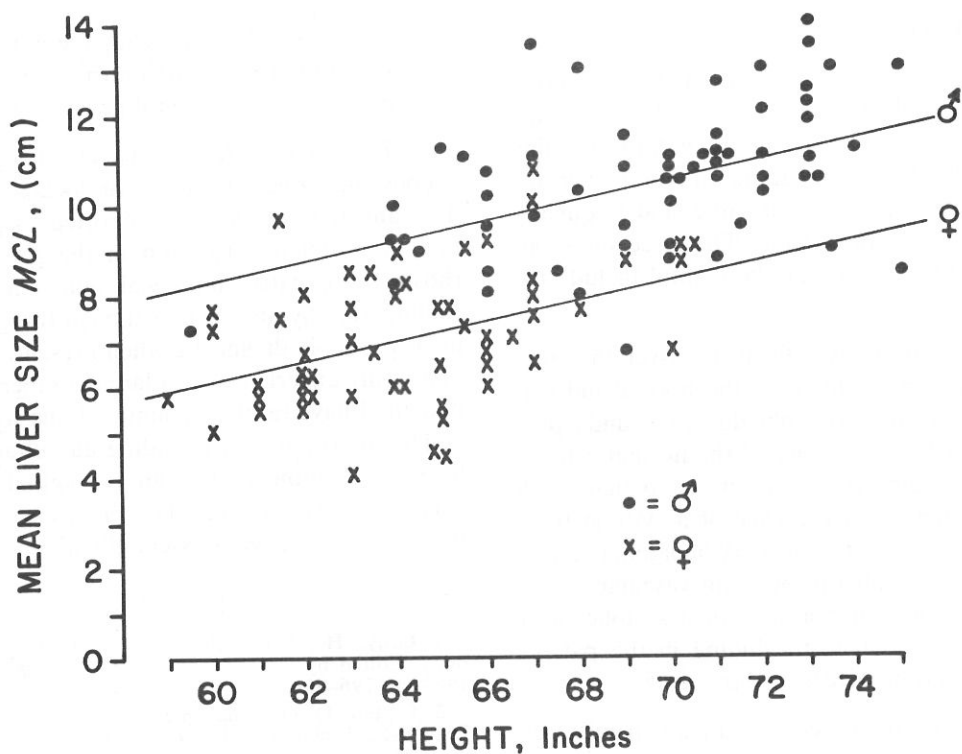


Figure 2.—The relationship between mean liver dullness in the mid-clavicular line (MCL) and height for each subject. The regression lines for both males and females are included.

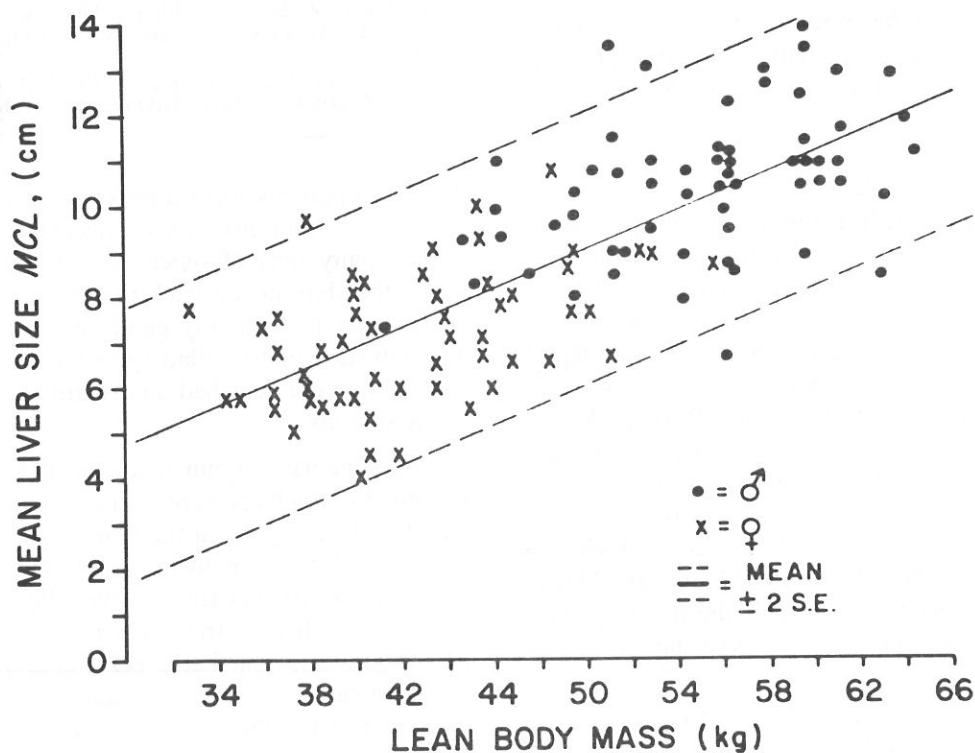


Figure 3.—The relationship between mean liver dullness and estimated lean body mass for each individual. The broken lines enclose ± 2 SE from the mean value for liver size. MCL = mid-clavicular line.

Auscultation Over the Liver

Although most clinicians do listen with a stethoscope over the abdomen, it is usually done with the intent of evaluating bowel sounds and/or listening for bruits. I have found that auscultation over the liver is often of definite clinical value, and frequently provides diagnostic information. The three situations in which this observation may be helpful include the following:

1. *A systolic bruit.* Systolic bruits over the liver are occasionally encountered in the normal individual, and as such are probably due to sounds produced by kinking or tortuosity of the normal arterial supply to the organ. However, in the patient with established cirrhosis, the presence of a systolic bruit often heralds a diagnosis of primary hepatoma. These tumors have been shown to be quite vascular in nature, and the relative importance of a systolic bruit over the liver as a diagnostic finding in the patient with hepatoma has been recently stressed.⁶

2. *Friction rub.* The presence of a friction rub over the liver almost surely indicates the presence of metastatic involvement of this organ. This physical finding probably results from serosally implanted metastasis causing an adhesive process with overlying peritoneum. Although it has been reported that friction rub over the liver can also occur in the patient with a primary hepatoma, or more rarely in the patient with

a peri-hepatitis (Curtis-Fitzhugh Syndrome), it is my firm conviction that a friction rub over the liver indicates metastatic disease until proven otherwise.

3. *The Venous Hum.* The classical finding of a venous hum over the liver, or located between the liver and the umbilicus, is reported to be an indication of portal hypertension in the patient with cirrhosis and a patent umbilical vein (the Cruveilhier-Baumgarten Syndrome). Although this physical finding is probably diagnostic when present, I must admit that in my experience with large numbers of cirrhotic patients I have rarely encountered this sign.

The importance of including auscultation over the liver as a routine part of an abdominal examination cannot be overstressed. The presence of any of the findings listed above is essentially diagnostic.

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(Continued from p. 32)

In general, all medical resources were pooled and Dr. Neugebauer of the San Diego team assumed verbal responsibility for the medical activities. LT M. H. Novegrod, MC, USNR, Ship's Medical Officer, provided the necessary liaison with the various departments of the ship and supervised the ward areas. CDR Gibbs (Portsmouth) and LCDR W. D. Young, MC, USN (Lejeune), both general surgeons, acted as the triage officers. Most of the surgical procedures were conducted by the three orthopedists. Doctor Neugebauer, and LT J. L. Jochims, MC, USNR, the flight surgeon attached to the HMM-365, the Marine helicopter squadron, did most of the inland surveys and selection of patients for evacuation to the GUAM.

After three days of operations off Chimbote, the GUAM moved 100 miles south to Paramonga, where additional Peruvian and other teams were awaiting airlift into the disaster areas. Paramonga was spared by the earthquake and had a fine hospital; most of

GUAM's patients were transferred to it. Three days after completing insertion of medical teams and airlifting many tons of relief supplies into the mountains, the ship moved back to Chimbote to resupply teams they had initially emplaced. Two days later, the ship steamed to Callao (port for Lima); the surgical teams were detached and returned by air to their home stations.

The principal recommendations made by the teams on initial debriefings were to include more neuroleptic anaesthetic agents in the mount-out blocks; add a cast room technician to the team, and to have sow special packs on call for disaster relief operations—i.e., packs with pediatric and female patient necessities. It was also felt that a nurse-anaesthetist would be a particularly valuable addition to each team. It is the intent of the Bureau to act favorably on each of these recommendations. Formal reports from the teams are in preparation. The above article was prepared from telephone conversations with the teams and public affairs releases.☞

MANDIBULAR ANKYLOSIS

CORRECTION OF A CASE OF 10 YEARS' DURATION

CDR W. R. Hiatt, DC, USN*, Department of Dentistry,
United States Naval Hospital, Guam, Mariana Islands.
Oral Surg 28(4):618-619, October 1969.

The following case is presented because of the unusual 10-year duration of ankylosis of the jaw. Also of interest is the fact that a previous operation had been performed to correct the ankylosis, with subsequent failure.

Case Report

A small and thin 18-year-old Malaysian girl had a history of osteomyelitis of the right and left tibias and other extremities. There had been sinuses, as evidenced by old healed scars in the skin overlying the anterior tibias. The episode of generalized osteomyelitis involving, by history, multiple bones was followed by the patient's inability to open her mouth from the time she was 8 years old. Anterior teeth had been removed to facilitate food intake. Caries was present, but not to the extent expected; nor was periodontal disease a factor.

Prior to referral to the United States Naval Hospital, Guam Dental Service, an osteotomy involving the right condyloid process had been performed from a preauricular approach. This procedure was carried out by an orthopedic surgeon at a local hospital. Temporary relief from the ankylosis was obtained but



Fig. 1. Preoperative roentgenogram revealing bony obliteration of temporomandibular joint and surrounding structures, with old osteotomy site and elongated coronoid process also shown.

The opinions expressed herein are those of the author and do not necessarily reflect the views of the Navy Department or the naval service at large.

* Present address: 5889 Cozzens St., San Diego, Calif. 92122.
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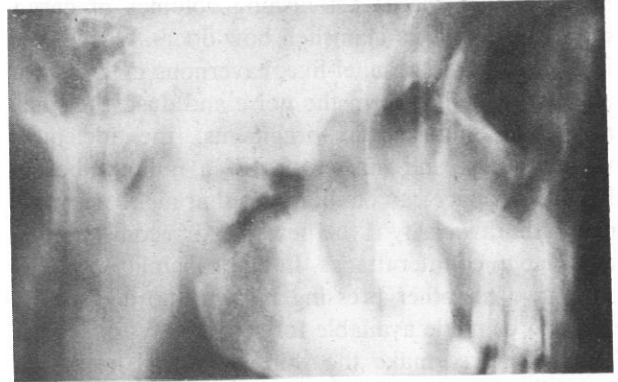


Fig. 2. Postoperative roentgenogram showing site of osteotomy and coronoidotomy.

was short-lived, being of only a month's duration. The jaw had reankylosed, and anterior opening was less than 0.5 cm. Vigorous attempts at opening the jaw met with failure. Roentgenograms revealed the old osteotomy site midway in the neck of the right condyloid process, with complete bony union of the condylar head and sigmoid notch with the skull. The coronoid process was greatly elongated (Fig. 1). A repeat osteotomy to include the coronoid process and the ascending ramus, followed by daily supervised oral physiotherapy, was deemed the treatment of choice.

Physical examination findings, laboratory data, and chest roentgenograms were within normal limits.

Hospital Course

On Sept. 28, 1966, with the patient under nasotracheal general anesthesia, the right ascending ramus of the mandible was approached through a submandibular incision and the coronoid process was severed and removed. The area of previous surgical intervention revealed exuberant bony overgrowth, and the mandible was surgically fractured with difficulty. Large round orthopedic burs were used to remove the bone at the surgical fracture site, leaving a space of approximately 1 to 1.5 cm. between the fractured ends (Fig. 2). The tissue was closed in layers, with a Penrose drain in place. Blood loss was estimated at 350 c.c. Mouth opening at the time of the operation was 30 mm. as measured from the right maxillary cuspid tip to the right mandibular cuspid (Continued on p. 9)

LST(H)—TO BE OR NOT TO BE?

By CAPT J. H. Stover, Jr., MC, USN, Code 49, BUMED.

The classic LST is one of the most useful amphibious force ships ever developed. Ungainly, slow, simple and cheap, it can chug up to undeveloped beachheads and discharge astonishing volumes of cargo, directly through its clamshell bow doors. Once cargo is discharged, the tunnel-like, cavernous tank deck is an inviting refuge from the noise and dust, the small arms fire and mortar fragments, the inclement weather, flies and mosquitoes of a military beachhead. The space can be illuminated at night. The ship can withdraw easily if the beachhead becomes untenable due to counterattacks. In all probability, the ship will have no other pressing missions to accomplish and can be made available for several days or longer. These features make the ships a natural haven for temporary staging of casualties, most particularly at night. In WW II, LSTs were fitted out with clamps so that tiers of litters could be attached to the tank deck bulkheads and others were fitted with watertight doors leading from the tank deck into the living spaces so that potential operating rooms and ward spaces were available. Many had surgical teams embarked.

When assigned this mission, the ships were known as LST(H)'s (LST, Hospital) and were a welcome adjunct in numerous Pacific landings (Picture 1).

The new generation of LST's now being delivered to the fleet are very different ships (See picture 2). They retain the enormous tank deck, but no longer have the familiar blunt clamshell bow. Their sharp clipper bow permits 20-knot speeds so that they can keep up with the modern amphibious force. The bow is surmounted by a pair of "horns", like a net tender, which support a deployable ramp. Truck traffic moves up an internal ramp, over the bow, and down the external ramp. Helicopters can land on the spacious weather deck. They have a sterngate—amphibious vehicles can drop directly into the sea and landing craft can marry to the sterngate to accept wheeled vehicles and cargo for waterborne delivery to the beach. They carry large quantities of petroleum products to discharge to storage bladders on the beach. When their off load tanks are full, the new LST's have much more draft than the old ones and can no longer slide up on the beach practically to the water's





edge. They are much bigger, faster, more complex and more expensive than the older ships. They are no longer as expendable as in WW II—and are capable of performing missions which may limit their availability after cargo discharge. Their speed enables them to be profitably turned around to steam to logistics bases to pick up resupplies for the committed forces. Will they be available and useful as LST(H)'s?

At the present time, employment tactics for the new ships are being developed. It seems likely that the ships will discharge combat vehicles and cargo initially over pontoon causeways (which they carry strapped to their sides) and then withdraw until things are more stable on the beachhead and fuel bladder farms can be established to accept the gasoline and oil carried by the LST's. If this tactic is employed, they will not be available as a patient staging facility during the early hours of the assault. On the other hand, this interval of time away from the beach may afford an excellent opportunity to reconfigure the tank deck area for patient reception.

Until the supplies of petroleum products are discharged, the new LST's are, in effect, miniature tankers and one might hesitate to embark patients on such a vessel. However, after discharge to the bladder

farms, the new LST's have a much more shallow draft forward and can execute the classical beaching maneuver close to the surf line, which should simplify acceptance of ambulance and litter carry traffic. If beached in the vicinity of a Shore Party Evacuation Station, patients could be accepted directly, thus avoiding small boat transfer.

Are the new LST's suitably configured to assume a casualty care role? At present, the shipboard operating room facilities are small and cramped and passageways leading to them have some sharp turns which are very difficult for rigid litter (Stoke's stretcher) traffic. The ships are equipped with a special hoist to transfer patients from the tank deck to the present operating room; however, after surgery the patients must be maneuvered down a steep ladder to reach postoperative berthing areas. The ships do not have an X-ray capability.

Several possible courses of action are under study to make these ships more attractive as casualty receiving vessels. If bulkhead penetrations direct from the tank deck to the berthing areas can be made, patient handling will be greatly simplified and speeded. (This same alteration was required in the older LST's. Minimal sanitary facilities could be in-

(Continued on p. 56)

SELECTION FOR PROMOTION TO REAR ADMIRAL APPROVED BY THE PRESIDENT ON JUNE 8

Vernon Leroy Anderson was born on September 27, 1913, in St. Cloud, Minnesota. He graduated from St. Cloud Technical High School in 1931. Following high school, he attended St. Cloud Teachers College where he received his teaching certificate in 1933.

During the years 1933–1936 he taught school and coached basketball at Granite Falls, Minnesota.

CAPT Anderson received his Doctor of Dental Surgery degree in 1940 from the University of Minnesota School of Dentistry. Following his graduation CAPT Anderson interned and instructed at the University of Indiana School of Dentistry during 1940 and 1941. He entered the U.S. Navy in May 1941 and served in numerous ships, stations, and Marine Corps units. His tour in USS WASP was terminated when the ship was sunk in enemy action off Guadalcanal. He received a Purple Heart in this action. His

service included duty at U.S. Naval Academy; Navy Department; Marine Corps Air Station, Ewa, Hawaii; Marine Corps Air Station, Quantico, Virginia; USS JASON; 3rd Marine Division; Headquarters, Fleet Marine Force, Atlantic; Headquarters, Fleet Marine Force, Pacific; and he is currently serving on the staff of the Commandant of the Marine Corps.

CAPT Anderson's experience with and knowledge of the Marines have earned him official letters of commendation from the Commanding Generals of the 3rd Marine Division and of the Fleet Marine Force, Atlantic. He was awarded the Legion of Merit with Combat V for duties performed as Force Dental Officer, Fleet Marine Force, Pacific, when he made numerous trips to Vietnam.

He has attended numerous professional schools and courses since his commissioning in the Navy. Among these are: Maxillo-facial Course, Mayo Clinic, Rochester, Minnesota; Postgraduate School at the Naval Dental School, Bethesda, Maryland; and the Advanced Prosthetic Course at the Naval Dental School, Bethesda.

CAPT Anderson is married to the former Patricia Lee Taylor of Columbus, Ohio, a former Lieutenant in the WAVES and a swimmer of national note. They have three children: Karen Lee (23), a microbiologist at the University of Colorado Medical Center; Kristen Sue (22), a senior in Fine Arts at Ohio State University; and Craig Jon (16), a junior at McLean High School, McLean, Virginia.

The Captain is a member of the American Dental Association, the Delta Sigma Delta Fraternity, and the International College of Dentists. His hobbies include furniture refinishing, golf, and all spectator sports.

CAPT Anderson has been awarded the following medals and campaign ribbons: Legion of Merit (with Combat V), Purple Heart, American Defense, American Theater, European-African Theater, Pacific Theater, World War II Victory Medal, National Defense, Korean Service Ribbon, United Nations Ribbon, and the Korean Presidential Unit Citation.



CAPT Vernon Leroy Anderson, DC, USN

Oscar Gray, Jr., was born in Little Rock, Ark., on May 15, 1916, son of Dr. Oscar Gray, Sr. and Mrs. (Rose Mathews) Gray, both now deceased. He attended Little Rock Junior College and the University of Kentucky at Lexington. On June 17, 1942 he was commissioned Ensign in the U.S. Naval Reserve and from July to December 1943, under the V-12 Program, attended the University of Arkansas School of Medicine at Fayetteville, from which he received the degree of Bachelor of Science and Doctor of Medicine in 1944. On December 18, 1944, he was commissioned Lieutenant (junior grade) in the Medical Corps of the U.S. Naval Reserve. He subsequently advanced in rank to that of Captain, to date from July 1, 1959, having transferred from the U.S. Naval Reserve to the U.S. Navy on January 7, 1957.

He interned at the Naval Hospital, Portsmouth, Va., from December 1943 to October 1944, then reported as Medical Officer on board the USS RODMAN (DMS-21), which operated along the Atlantic Coast. Detached from that destroyer mine sweeper in December 1944, he next served as Assistant Medical Officer at the Naval Air Station, Port Lyautey, French Morocco. In June 1946 he was released from active duty.

He returned to active naval service in January 1953, attended the School of Aviation Medicine at the Naval Air Station, Pensacola, Fla., and was then designated a Flight Surgeon with Composite Squadron FOUR, based at the Naval Air Station, Atlantic City, N.J. In that assignment, he also served as Medical Officer for Dependents and an Assistant in the Station Infirmary. In July 1955 he was again released from active duty.

During his periods of inactive naval service, he was engaged in the general practice of medicine and built and operated a nine-bed General Hospital and Clinic in his rural hometown of Jacksonville, Ark. He was also a member of the Jacksonville Board of Directors; Chamber of Commerce; Board of Directors, Jacksonville State Bank; and the Board of Directors of the Jacksonville Industrial Corporation.

Ordered to return to active naval service, he reported in January 1956 as Senior Assistant Medical Officer at the Naval Air Station, Pensacola, Fla. He joined the USS FRANKLIN D. ROOSEVELT (CVA-42) as Senior Medical Officer in January 1958. From January 1960 to August 1962 he served as Senior Medical Officer at the Naval Air Station, Point Mugu, Calif., and subsequently at the Naval Air Station, Lemoore, California. In June 1967, he joined the First Marine Aircraft Wing as Wing Medi-



RADM Oscar Gray, Jr., MC, USN

cal Officer. He was awarded the Air Medal with Numeral "1" to represent the First Strike/Flight Award and was cited as follows:

"For meritorious achievement . . . as a designated Naval Flight Surgeon, serving with the Fleet Marine Aircraft Wing during missions in support in combat operations in Southeast Asia against the insurgent communist guerrilla forces from September 21, 1967 through March 24, 1968. In the successful completion of these missions, CAPT Gray contributed materially to the success of United States efforts in Southeast Asia. . . ."

In June 1968 he became Medical Officer and Senior Flight Surgeon at the Naval Air Station, Jacksonville, Fla.

In addition to the Air Medal with Numeral "1", RADM Gray has the Bronze Star Medal with Combat "V"; Naval Reserve Medal; American Campaign Medal; European-African-Middle Eastern Campaign Medal; World War II Victory Medal; National Defense Service Medal with bronze star; and the Vietnam Service Medal. He also has the Republic of Vietnam Campaign Medal with Device.

He is married to the former Betty Jo Rogers of Little Rock, and they have four children, Oscar Gray, III, Rebecca Cogswell Gray, Lee Tapscott Gray and Thomas Michael Gray.

RADM Gray is a member of the Arkansas Medical Society and the American Medical Association.



RADM William C. Turville, MC, USN

William Charles Turville was born in Boston, Mass. on October 2, 1919, son of William H. H. and Florence M. Turville. He attended the College of William and Mary, Williamsburg, Va., from which he received the degree of Bachelor of Science in 1941 and in 1944 was awarded his Doctor of Medicine degree from the University of Pennsylvania at Philadelphia. He was commissioned Ensign in the U.S. Naval Reserve on April 18, 1942 and while attending the University of Pennsylvania was a member of the Naval Reserve Officers Training Corps Unit. Appointed Lieutenant (junior grade) in the Medical Corps of the U.S. Naval Reserve on September 23, 1944, he subsequently advanced in rank to that of Captain, to date from July 1, 1959, having transferred from the U.S. Naval Reserve to the U.S. Navy on June 15, 1945.

From September 1944 to July 1945, he interned at the Naval Hospital, Philadelphia, Pa., after which he served at the Naval Hospital, Hilo, Territory of Hawaii. Transferred in June 1946 to the Radio Station in Hawaii, he remained there until March 1947 and the next month was assigned to the Naval Hospital, Newport R.I. He had resident training in surgery at the Naval Hospital, Bethesda, Md. during the period November 1947 to November 1948, after which he continued training at the Naval Hospital, St. Albans, N.Y.

In August 1950 he joined the USS MONTEREY (CVL-26) and in October 1951 reported on board the USS WORCESTER (CL-144). He again had residency training in surgery, this time at the Naval Hospital, Philadelphia, Pa. (April 1952–September 1953) and at the University of Pennsylvania. In June 1954 he returned to the Naval Hospital, Philadelphia, for duty, and in July 1956 was assigned to the Naval Hospital, Guantanamo Bay, Cuba. He reported in September 1958 as Chief of Surgery at the Naval Hospital, Chelsea, Mass., and in September 1962 transferred, in a similar capacity, to the Naval Hospital, Camp Lejeune, N.C. He became Executive Officer and Chief of Surgery at that hospital in July 1965.

Ordered to the Bureau of Medicine and Surgery, Naval Department, Washington, D.C., he headed the Training Branch from November 1965 through June 1966, then served as Director of the Professional Division. "For exceptionally meritorious service . . ." from November 1965 to November 1968, he was awarded the Navy Commendation Medal. The citation further states in part:

"Responsible for the direction of personnel actions and training of personnel for the Vietnam conflict, CAPT Turville sought innumerable means to continue to elevate patient care and professional training to the highest possible levels of excellence. His responsibility in the selection of applicants for the various Medical Corps training programs was discharged outstandingly. As the Surgeon General's appointee, CAPT Turville was assigned to a large number of Department of Defense, Navy, and civilian medical working groups and committees, where he represented the Navy and the medical profession with distinction. He played an outstanding role in disseminating current professional information through letters, brochures, and instructions. . . ."

In November 1968 he assumed command of the Naval Hospital, Jacksonville, Fla. and in September 1969 became Commanding Officer of the Naval Hospital and Deputy Commanding Officer of the National Naval Medical Center, Bethesda, Md.

In addition to the Navy Commendation Medal, RADM Turville has the American Campaign Medal; Asiatic-Pacific Campaign Medal; World War II Victory Medal; and the National Defense Service Medal with bronze star. He is married to the former Nonie Wilkinson of Norfolk, Va., and they have three children, Nonie Wilkinson, William Charles and John Alfred Turville.

He is a member of the American College of Sur-

geons, American Board of Surgery and Alpha Omega Alpha (Honor Medical Society).

Charles Loring Waite was born in Washington, D.C., on March 18, 1923, son of Dr. Charles P. and Evelyn (Lang) Waite (now deceased). He attended Woodrow Wilson High School, Washington, D.C., and the University of Maryland at College Park, before entering Georgetown University, Washington, D.C., from which he received his Bachelor of Science degree in 1943. Commissioned Ensign in the U.S. Naval Reserve in February 1943, he continued study, under the V-12 Program, at Georgetown University School of Medicine. He received his Doctor of Medicine degree in 1946 and was commissioned Lieutenant (junior grade) in the Medical Corps of the U.S. Naval Reserve on March 17 that year. He subsequently advanced in rank to that of Captain, to date from April 1, 1962, having transferred from the U.S. Naval Reserve to the U.S. Navy on December 10, 1951.

CAPT Waite interned at the Naval Hospital, Bethesda, Md., from March 1946 until March 1947. He then had three months' instruction at the Naval School, Deep Sea Divers, Washington, D.C., and during the period July to December of that year attended the Line Officer Course in Submarines at the Submarine School, Submarine Base, New London, Conn. In January 1948 he joined Submarine Squadron THREE as Medical Officer, and in April 1949, reported as Resident Physician at Children's Hospital, Washington, D.C.

Between September 1950 and February 1952 he served as Medical Officer at the Naval School, Deep Sea Divers, Washington, D.C. While in that assignment he also had duty as Assistant Medical Officer for the Expert Diving Unit and as Medical Officer of the Underwater Demolition Team. Returning to the Naval Hospital, Bethesda, Md., he was assigned as Senior Resident (Pediatrics) until February 1953, when he joined Submarine Squadron ONE as Squadron Medical Officer. In that capacity, he also served as Acting Force Medical Officer, Submarine Force, U.S. Pacific Fleet; Senior Medical Officer at the Naval Dispensary, Submarine Base, Pearl Harbor, Territory of Hawaii; and Submarine Escape Training Tank Officer.

In August 1955 he became Assistant Chief of Pediatric Service at the Naval Hospital, Bethesda, and while there also served as Intern Advisor and Technical Advisor for Navy Medical Training Films. During the period July 1958 to July 1960 he was Chief of Dependent Service; Intern Advisor and Officer-in-



CAPT Charles L. Waite, MC, USN

Charge of Naval Indoctrination courses. In July 1962 he joined the Staff of Commander Submarine Force, U.S. Pacific Fleet as Force Medical Officer with additional duty as Senior Medical Officer at the Submarine Base, Pearl Harbor, and as Submarine Escape Training Tank Medical Officer.

Assigned in June 1964 as Commanding Officer of the Naval Submarine Medical Center, Submarine Base, New London, Groton, Conn., he had additional duty from December 1964 to June 1965 as a High Pressure Inside Instructor and Observer and as Experimental Test Subject in High Pressure Chambers. In August 1967 he transferred to the Naval Hospital, Portsmouth, Va., to serve as Executive Officer until July 1968; he then assumed command of the Naval Medical School, National Naval Medical Center, Bethesda, Md.

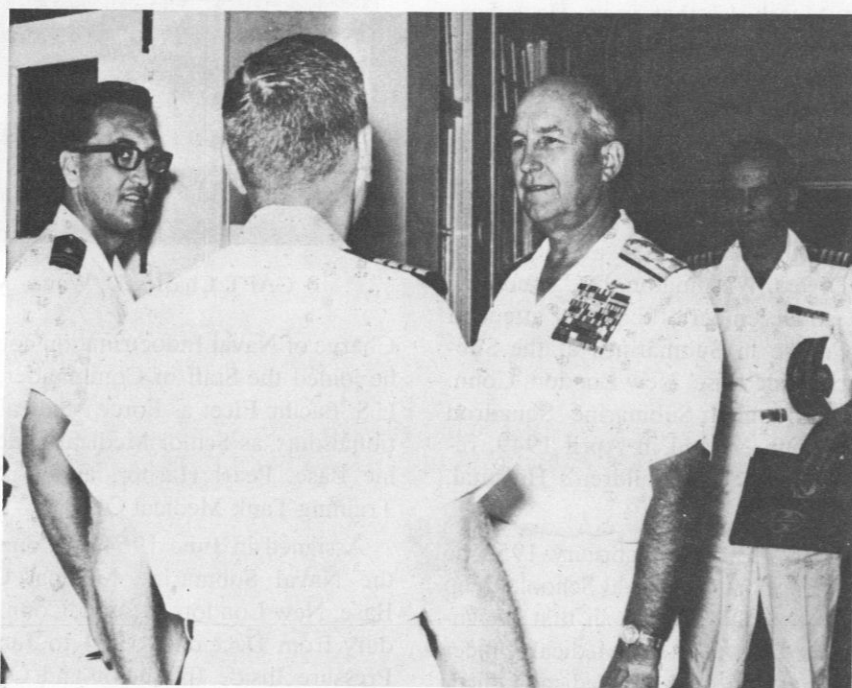
CAPT Waite has the Navy Commendation Medal; American Campaign Medal; World War II Victory Medal; Navy Occupation Service Medal, Asia Clasp; China Service Medal; National Defense Service Medal with bronze star; Korean Service Medal; United Nations Service Medal; and Korean Presidential Unit Citation Badge.

He is married to the former Regina Perkal of Atlanta, Ga., and they have six children, Charles (Continued on p. 56)

CNO MESSAGE 302327Z JUN 70 TO NAVOP:

"1. For the past thirty-five months, I have been honored with the privilege of serving as your Chief of Naval Operations. I now stand ready to be relieved by Admiral ZUMWALT.

2. During my tenure, you—our Nation's Navymen—have performed superbly in all aspects of naval operations as you have steamed on, under and flown over the distant oceans of the world. You have borne the demanding responsibility of protecting our people and our nation with characteristic excellence. Despite a challenging environment of high tempo activities in rapidly changing circumstances, your performance has been the source of unyielding pride to me for I knew that you would invariably meet . . . and more often exceed . . . my expectations and those of your commanders.



ADM Moorer talks with LT Hazlett, MC, USN (left); CAPT P. O. Geib, MC, USN, Commanding Officer; and CAPT P. Kaufman, MC, USN (right) during a visit to the Naval Hospital in Yokosuka, Japan.

3. I fully appreciate that your service has not been without sacrifice for you, your families and your loved ones. I am most grateful, as the CNO and an American, that you are willing to pay the price for freedom and that you have helped to assure the blessings of this great country for all of your fellow countrymen.

4. In preparing to assume the duties of Chairman of the Joint Chiefs of Staff, I leave Command of the Navy to the brilliant leadership of Admiral ZUMWALT. His deserved reputation for distinguished achievement gives me utmost confidence in the future course of our Navy. I know you will reward him with the unstinting loyalty and dedication which you have given me.

5. To each of you, I express my deep appreciation and wish you Godspeed, Good Luck, Fair Winds and Following Seas. T. H. MOORER, Admiral, U.S. Navy." 🌿



SKIN TESTING FOR TUBERCULOSIS

To the Editor: Navy Medical Newsletter, VOL 55, No. 4, April 1970, contains a paper entitled "Outbreak of Tuberculosis in a High School in Alabama" followed by the editorial comment that the described outbreak again demonstrated the value of serial skin testing for tuberculin reactivity. Jet injector guns were utilized in the reported survey.

In 1967, LCDR Jane Hessel, NC, USN, and I ran a limited comparison between the jet injector gun and the traditional intradermal technique for PPD testing. Each individual in the series was given the material in one forearm by intradermal injection and in the other by jet injector, both tests being applied at the same visit. To our surprise, we recorded more positives by means of the jet injector technique than by the intradermal route. While we felt that this could represent faulty technique employed by the personnel administering the intradermal tests, we also considered that for mass screening, the use of the jet injector gun might provide a more consistent means of testing, less subject to variability in technique.

Communication with the Preventive Medicine Division of BUMED revealed that in larger series elsewhere, it had been concluded that the jet injector technique was not as reliable in terms of both sensitivity and quantitative interpretation of results.

Has there been any modification in the recommended method of PPD testing? Perhaps a brief editorial comment on the current status of the jet injector technique for tuberculin testing in the Navy's Tuberculosis Control Program might be of value.

LCDR Charles R. Mock, MC, USN
Naval Air Facility Medical Dept.
Washington, D.C. 20390

Dr. Mock's letter was referred to the Preventive Medicine Editor who provided the following timely and informative reply.

Dr. Mock's personal observation that the jet injector produced more positive reactions than did the Mantoux test is most interesting. If adequate scientific documentation of this were available, the jet injector technique for tuberculin testing would be readily accepted because (a) speed of administration, (b) elimination of requirement for procuring needles and syringes, and (c) better acceptance by personnel make the jet injector an excellent device for use in immunization programs.

However, information available to the Preventive Medicine Division, Bureau of Medicine and Surgery, Department of the Navy, indicates that the jet gun method is not accurate enough to be used in the Navy's Tuberculosis Control Program. Preventive Medicine Unit No. 2, Norfolk, Virginia, conducted comparative studies of Mantoux method versus jet injector technique on the USS NORFOLK and the USS AMPHION several years ago and found that 46.2% and 21%, respectively, of positive reactors would have been missed had only the jet injector technique been employed.

In addition to these studies, Dull, et al.,¹ in a study of school children found that of 99 persons with Mantoux readings of at least 10 mm, only 45 had such positive readings by the jet injector test.

Feigenbaum, et al.,² simultaneously tested 1,478 Vietnamese mental patients with jet-injector and

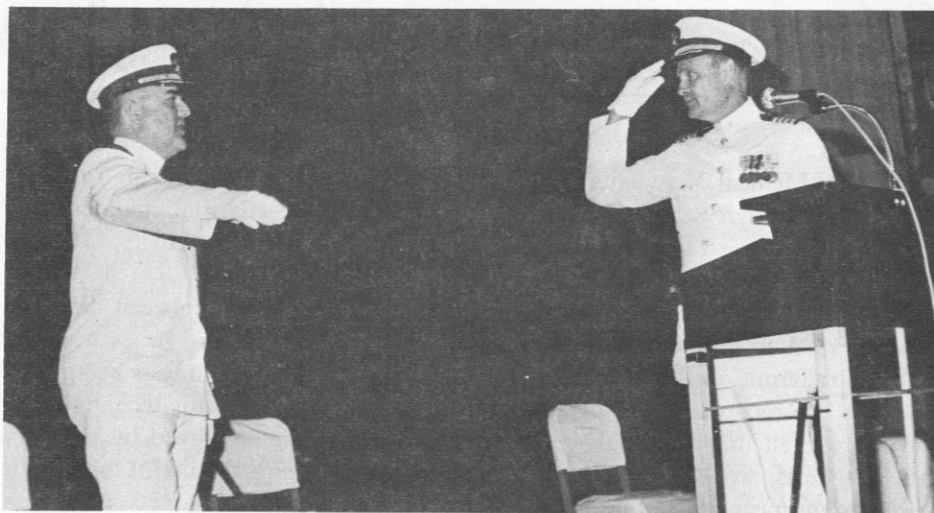
¹ Dull, H.B., et al., Jet Injector Tuberculin Skin Testing: A Comparative Evaluation. *American Review of Respiratory Disease*, 97: 38-45, January 1968.

² Feigenbaum, E., M.D., et al., Comparing Mantoux and Jet-Injection Methods of Tuberculin Skin Testing. *Public Health Reports*, 83: 974-978, November 1968.

(Continued on p. 56)

NOTES AND ANNOUNCEMENTS

CHANGE OF COMMAND CEREMONIES



On June 19, 1970, CAPT Thomas H. Mayo relieved CAPT Kenneth L. Longeway as Commanding Officer at the U.S. Naval Dental Clinic in Yokosuka, Japan. The Naval Dental Clinic received the Navy Unit Commendation during the ceremony, when RADM Daniel F. Smith, Commander U.S. Naval Forces, Japan, also presented the Meritorious Service Medal to CAPT Longeway. CAPT Longeway is scheduled to report for duty at Naval Air Station, Miramar, Calif., where his two sons are naval pilots.

Top Photo: CAPT Longeway (left) salutes CAPT Mayo (right) after being relieved as CO of U.S. Naval Dental Clinic, Yokosuka.

Bottom Photo: Setting a notable precedent, LT K. Kumagai directed the Japanese Maritime Self Defense Force Band which provided music during the change of command ceremony.



On June 1, 1970, CDR T. R. Turner, USNR, relieved CAPT J. W. Lea, USNR, as Commanding Officer of First Medical Battalion, FIRST Marine Division (Rein), Fleet Marine Force, Pacific, in DaNang, Republic of Vietnam. A modest but most interesting program of the ceremony bears a photograph of a Medic helmet and sign which hang in the entrance to A & S. The sign reads: "It is the duty of a Hospital Corpsman to wait in obscurity most of his life for a crisis that may never come. But, when it does come, it is his duty to give it all he has". The program further provides the following historical review of 1st Medical Battalion which is worthy of note.

"On 6 September, 1940, 1st Medical Battalion was activated at Quantico, Virginia, in support of the 1st Marine Brigade, operating in the Caribbean. On 1 February, 1941, the Brigade was reorganized and redesignated 1st Marine Division FMF and the Medical Battalion took on its present form.

In August, 1942, most of the battalion landed at Guadalcanal in support of the Division's assault there. In late 1943, elements of the battalion landed at Cape Cloucester and other areas in New Britain in support of action against the enemy. In September, 1944, and April, 1945, the battalion landed at Peleliu and Okinawa respectively participating in the seizure and occupation of these islands. 1st Medical Battalion was awarded a Presidential Unit Citation for its action in each of these three campaigns. In September, 1945, the battalion arrived at Tientsin, China, serving there until May, 1947, when it redeployed to Camp Pendleton.

In September, 1950, three companies landed at Inchon, Korea, participating in action against the enemy, thereafter serving at Wonsan, Chosin, Pusan, and Lonhak, and receiving three United States P.U.C.'s, three Korean P.U.C.'s and two N.U.C.'s during the entire Korean campaign through 1955, at which time they returned to Camp Pendleton.

On 15 August, 1965, Charlie Company disembarked at Chu Lai, RVN, and as other companies arrived, they were deployed in support of various 3rd Marine Division operations in the Quang Ngai, Chu Lai, Tam Ky areas. By May 1966, all elements of 1st Medical Battalion were in country, and attached to the 1st Marine Division. In January, 1967, the command post was moved to its present location near DaNang. The battalion has remained here since, except for its deployment to Phu Bai from April to

September, 1968, in support of Task Force X-ray. In 1969, following extensive damage from the ASP #1 Explosions, SEA huts in the operational area were replaced with air-conditioned Butler Buildings.

Since arrival in Vietnam elements of 1st Medical Battalion have supported 28 Operations and the battalion has handled over 100,000 patients. Of these, 50,000 have been seen since early 1969. Also since early 1969, 30,000 Vietnamese have been cared for within the battalion Med-cap program and at the battalion facility."

On April 8, 1970, CAPT Elgin C. Cowart, Jr., relieved CAPT George J. Taylor III, as Commanding Officer of the Naval Hospital in USS SANCTUARY (AH-17). CAPT Taylor is Board Certified in Obstetrics and Gynecology and is a Fellow of the American College of Obstetricians and Gynecologists. Prior to reporting aboard SANCTUARY, he had served as Executive Officer at the Naval Hospital, St. Albans, N.Y. CAPT Cowart had reported to Naval Hospital, USS SANCTUARY in October 1969 and served as Chief, Pathology Service, until assuming command. He is a Fellow of the American Board of Pathology in Anatomic Pathology, and of the American Society of Clinical Pathologists.

On May 19, 1970, CAPT William J. Harrison, DC, USN was relieved of Command of the U.S. Naval Dental Clinic, Guantanamo Bay, Cuba, by CAPT Carl H. Wilkens, Jr., DC, USN. CAPT Harrison has been transferred to the Naval Training Center, Orlando, Fla., incident to retirement after more than 26 years of active service.

On July 9, 1970, CAPT William G. Lawson, MC, USN, was relieved of command of the Naval Hospital in Orlando, Fla., by CAPT George W. Taylor, Jr., MC, USN. ㊦

MEDICAL SUPPORT DIVISION IN BUMED

In order to consolidate responsibility for the various aspects of BUMED support to the Fleet and Marine Corps, a new Bureau Division has been established by the Surgeon General under the Assistant Chief of the Bureau for Planning and Logistics. The new Division (Code 49) has been named the "*Fleet and Marine Corps Medical Support Division*" and CAPT J. H. Stover, Jr., MC, USN, has been assigned as Director. CAPT Stover's last assignment was as

Director, Marine Corps and Amphibious Medical Support Division (Code 75), which was disestablished upon formation of Code 49.

The Fleet and Marine Corps Medical Support Division shall administer and coordinate all of the BUMED aspects relating to Fleet and Marine Corps medical support. The Division shall study, evaluate, coordinate, and make recommendations concerning medical support requirements and doctrine, the organizational planning, the requirements of the medical personnel program, the medical logistic support,

and the medical field training for medical support to the Marine Corps. The Division shall also be responsible for the periodic studies of requirements and standards of medical spaces and medical material aboard naval ships.

CAPT Stover will have additional duty as Head, Shipboard, Amphibious and Field Medicine Section (7114), Research Division.

Comments, suggestions, and questions pertaining to medical service in support of Fleet units and the Marine Corps are solicited.—Code 49, BuMed. ¶

NAVY SPONSORS SYMPOSIUM ON DRUG ABUSE

Navy Medical Department personnel and civilians in the Washington, D.C., area received a barrage of information about the growing problem of drug abuse in this country at a recent symposium presented by the National Naval Medical Center in Bethesda, Maryland. The participants received the latest in-

formation on drugs and drug abuse from researchers, law enforcement agencies, health agencies, clergymen, minority group leaders, and military physicians.

Discussions and speeches emphasized the need to treat the whole person in dealing with drug abusers. Judge Timothy Murphy of the D.C. Court of General



Question from audience is being answered at Drug Abuse Symposium held 3-4 June 1970 at the National Naval Medical Center, Bethesda, Maryland. Members of panel discussing the many aspects of drug abuse are, from left to right: Mr. Jeffrey Donfeld, Presidential Aide, White House; Frank Bartimo, Esq., Assistant General Counsel, Department of Defense and Chairman of DOD Committee on Drug Abuse; and Mr. John Warner, Executive Assistant to the Director, Bureau of Narcotics and Dangerous Drugs, U.S. Department of Justice.—Photo by courtesy of Naval Medical School, NNMC, Bethesda, Md.

Sessions said that the criminal courts are society's last resort in treating society's problems—like a doctor in an emergency room."

Dr. Sydney Cohen, Director, Division of Narcotic Addiction and Drug Abuse of the National Institute of Mental Health, said that there are new chemicals showing promise for the treatment of heroin addiction. One chemical, L-alpha-acetylmethadol, is a narcotic, like methadone, but may last much longer—up to 72 hours. It is possible that L-alpha treatment may require smaller doses than methadone and thus have less side effects. "Until another method is perfected," Dr. Cohen said, "controlled addiction with methadone is better than uncontrolled addiction with heroin."

Researchers are also working with narcotic antagonists. An addict under the effects of an antagonist will not get high from an injection of heroin. This lack of a stimulative effect serves as a negative reinforcement (why shoot up if you can't get high?).

The problem with antagonists so far is that they are only effective for two to three hours. Researchers are trying to perfect a timed release method of administering these antagonists.

A problem pointed out by the seminar participants is the constant barrage of advertisements a person is exposed to, proclaiming relief from this or that feeling by taking a pill. These advertisements have helped produce a drug-oriented society.

The major TV networks, in cooperation with advertisers, are going to help fight this problem, according to Jeffrey Donfeld, special aide to President Nixon. Mr. Donfeld said that agreement reached in special meetings between the President, TV and advertising executives indicates that there would be regular prime-time shows dealing with drugs, and that the advertisers would develop short commercials to inform the public about drugs. The shows should begin by the fall of 1971.

Navy physicians and chaplains at the Naval Medical Center arranged the symposium because of their concern over the growing drug abuse problem in the military as well as the civilian community. According to RADM J. W. Albrightain, Deputy Surgeon General of the Navy and the keynote speaker at the symposium, the Navy had 6000 cases of drug abuse reported in 1968. For 1969, the number of reported cases had jumped 50% to 9000.

RADM Albrightain pictured the average drug abuser in the Navy as 19–23 years old, single, and not rated. Abusers have no pattern as to I.Q. or socio-

economic background.—PAO, NNMC, Bethesda, Md. ☸

HONG KONG INFLUENZA MONOGRAPH

The proceedings of the International Conference on Hong Kong Influenza have recently been published in Volume 41, Numbers 3, 4, and 5 of the Bulletin of the World Health Organization.

This excellent monograph includes papers on the properties and epidemiology of the Hong Kong influenza virus, inactivated and live vaccines, future influenza vaccines and chemotherapy and chemoprophylaxis of influenza. A French summation of key articles is also included.

Individual copies of this 750-page publication may be purchased for \$9.00 from the American Public Health Association, Inc., 1740 Broadway, New York, New York 10019. ☸

GRADUATE TRAINING TERMINOLOGY

In recent years an inaccurate vernacular has come into use which, while understood by Medical Department personnel, is subject to misinterpretation by the layman: the terms "Teaching Hospital" and "Non-Teaching Hospital." The primary mission of any hospital accredited by the Joint Commission on Hospital Accreditation is to provide the highest possible quality of patient care. Essential to this mission are three elements in proper balance:

- (1) a process of medical and paramedical education and training of those attending to the patients,
- (2) an atmosphere of inquiry engendered by programs of Clinical Research and/or Advanced Medical Technology, and
- (3) a creative administration

If the foregoing premise is accepted, the inappropriateness of classifying hospitals as "Teaching" and "Non-Teaching" is apparent. Even in the smallest of hospitals, a program of continuing education and training is essential to the fulfillment of its mission. Therefore, *all* hospitals with JCAH accreditation must be teaching hospitals.

To convey to all personnel the correct and accurate meaning of the educational training roles of all Naval Hospitals, the terms "Teaching Hospital" and "Non-Teaching Hospital" have been replaced by the classifications "Graduate Training Hospital" and "Non-Graduate Training Hospital." Graduate Training Hospitals are those hospitals that conduct formal training programs for interns and residents;

Non-Graduate Training Hospitals are those hospitals which have no such formal programs.—Code 31, BuMed. ☸

CORRESPONDENCE COURSE FOR DENTAL OFFICERS

The Naval Dental School offers a completely new correspondence course for dental officers, *Pharmacotherapeutics in Dental Practice*, NavPers 13110, based on the text *Pharmacotherapeutics in Dental Practice*, NavPers 10486. Both publications were developed at the Naval Dental School. The new course, which has six assignments, is designed for dental officers in general or specialized practice. Subjects covered are general principles of pharmacology, prescription writing, local anesthetics, sedatives and hypnotics, analgesics, antibacterial drugs, antihistamines, adrenal steroids, antisialogogues, and drugs for emergency use, all with emphasis placed on dental considerations.

For Naval personnel eligible to receive retirement points, twelve points will be creditable on completion of the course.—PAO, Naval Dental School, NNMC. ☸

SYMPOSIUM ON ROLE OF EAR ORGANS IN SPACE

RADM Edward P. Irons, MC, USN, Commanding Officer, Naval Aerospace Medical Center, Pensacola, Fla., announced the scheduling of the Fifth Symposium on the role of inner ear organs in space exploration.

Many scientists from the world's scientific community have been invited and approximately 100 are expected to attend the three-day meeting Aug. 19-21.

Sessions will be held in Building 600 at the Naval Air Station, Pensacola. About 30 papers containing information on results of their investigations will be presented by participants.

Off-station living accommodations will be used by attendees. Their unofficial schedule includes a swim in the Gulf of Mexico and a banquet during their stay in Pensacola.

Dr. Charles Berry, Manned Spacecraft Center, Houston, Texas, will discuss recent Apollo spaceflights at the banquet scheduled for 6:30 p.m., August 19, in the Empire Room of the Mustin Beach Officers' Club.

Tours will be arranged for families accompanying the researchers. ☸

MEDIHC NOW IN 25 STATES

Washington (AFPS)—Department of Defense officials report that 25 states are now participating fully in MEDIHC, the program that guides departing servicemen and women into civilian health centers.

MEDIHC (Military Experience Directed Into Health Careers) was started in Texas. The other states are:

Alabama	Iowa	New York
Arkansas	Louisiana	North Dakota
California	Maine	Oklahoma
Colorado	Missouri	Pennsylvania
Connecticut	Montana	Rhode Island
Florida	Nebraska	Tennessee
Idaho	New Hampshire	Utah
Indiana	New Jersey	Virginia

Through MEDIHC, qualified enlisted men and women with less than 90 days left on active duty are referred to educators and employers in civilian health fields.

The program is administered within the framework of the Project Transition program which operates at more than 200 military installations in the United States. Service personnel interested in the MEDIHC program should visit their Project Transition office or unit personnel office. (AFPS). ☸

SCHOLARSHIP PROGRAM

A Board appointed by the Surgeon General has selected 100 candidates for medical and osteopathic scholarships. The next academic year is the first full session of this program designed to improve Medical Corps procurement. The names of those selected have been submitted to the Chief of Naval Personnel. Included were 47 medical and 3 osteopathic students recommended for first-year training; 25 students were selected for second-year schooling and 25 more for their third year. ☸

SUPERVISORS' CONFERENCE


The Medical Service Corps Division of BUMED sponsored a Physical and Occupational Therapy Supervisors' Symposium, 24-26 June. The symposium was held at the Naval Medical School, NNMC, Bethesda, Md. CDR Joan M. Beckwith, MSC, was the BUMED coordinator at the conference. Seven of the larger Naval Hospitals were represented by their respective senior Physical or Occupational Therapy supervisors. ☸

HOSPITAL CORPSMAN TRAINING

The obligated service requirement for the NEC's listed below has been modified for Fiscal Year 1971. Personnel ordered to training in these NEC's having OBLISERV remaining from Class "A" School will not be required to incur an aggregate total. Rather, orders issued will indicate OBLISERV required in months for the specialty training only, and OBLISERV remaining from Class "A" School will be waived:

<i>NEC</i>	<i>Obligated Service</i>
HM-8406	25 Months
HM-8407	22 "
HM-8409	25 "

HM-8415	54 Months
HM-8417	*40 "
HM-8433	33 "
HM-8452	54 "
HM-8463	33 "
HM-8466	34 "
HM-8482	42 "
HM-8483	33 "
HM-8484	33 "
HM-8485	25 "
HM-8492	22 "
HM-8495	25 "

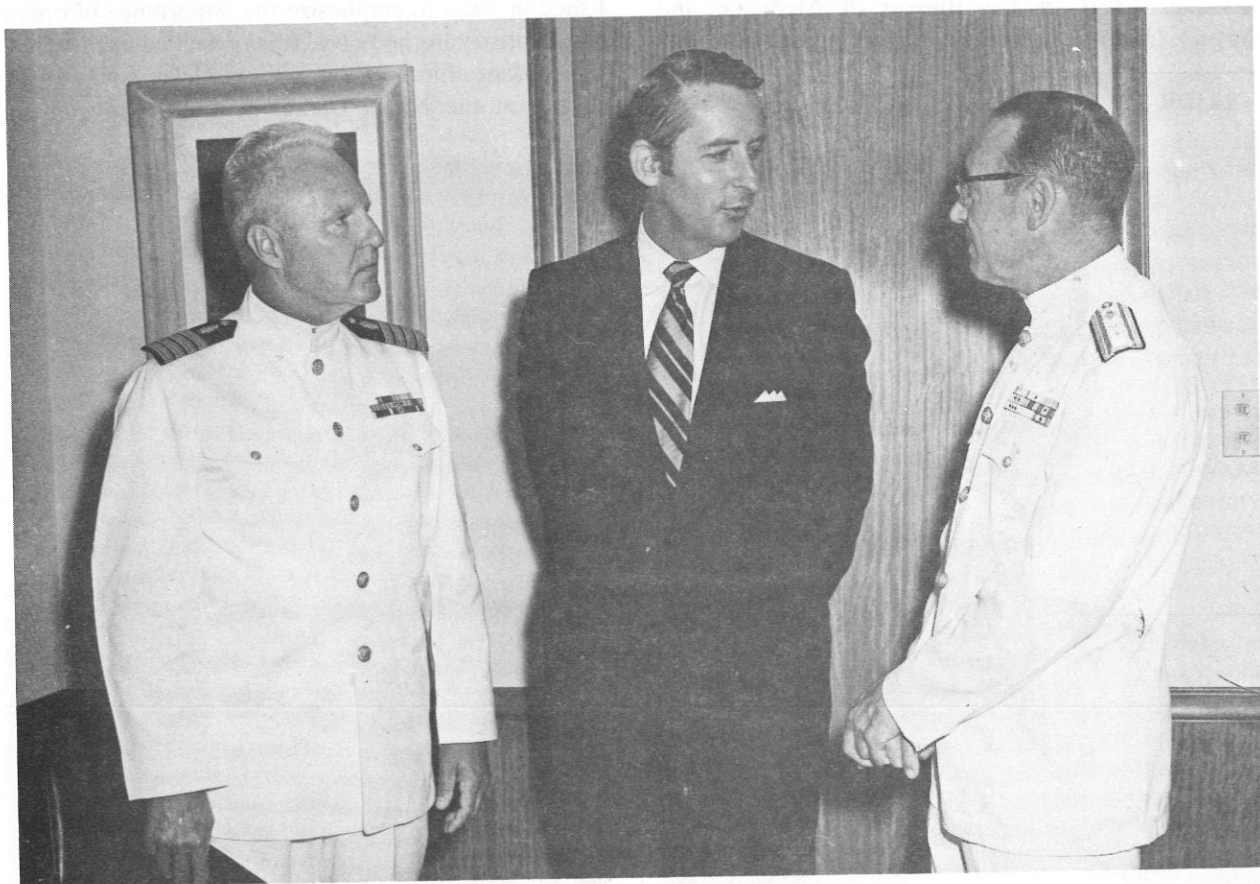
*Also, the OBLISERV for HM-8417 training is reduced from 60 to 40 months through Fiscal Year 1971.—Code 341, BuMed. 

NAVAL DENTAL SCHOOL GRADUATION

A graduation ceremony was held at the Naval Dental School, National Naval Medical Center, Bethesda, Maryland, on 19 June, for 42 dental officers who completed first, second, and third year level

courses in general dentistry and five dental specialties.

Presenting the commencement address was Dr. John S. Zapp, Special Assistant for Dental Affairs



and Acting Deputy Assistant Secretary for Health Manpower, Department of Health, Education, and Welfare.

Dr. Zapp, the first dentist to be named to a policy-level post in the Department of Health, Education, and Welfare, praised the military program that trains dental technicians to assist dental officers. Explaining how changing social conscience has multiplied the demand for health care programs, including dental care, Dr. Zapp stressed the shortage of qualified people to fulfill the needs. It is by forming auxiliary team aid, he said, that expanded services can best be provided in the 1970's.

A highlight of the ceremony was the Commanding Officer's announcement of the three annual award winners in the first-year-level courses. LCDR Richard B. McCoy, DC, USN, received the Operative Dentistry Award; LCDR Oscar B. Walker, DC, USN, the Research Award; and LCDR Carl E. Brannan, DC, USN, the Commanding Officer's Award for General Excellence.

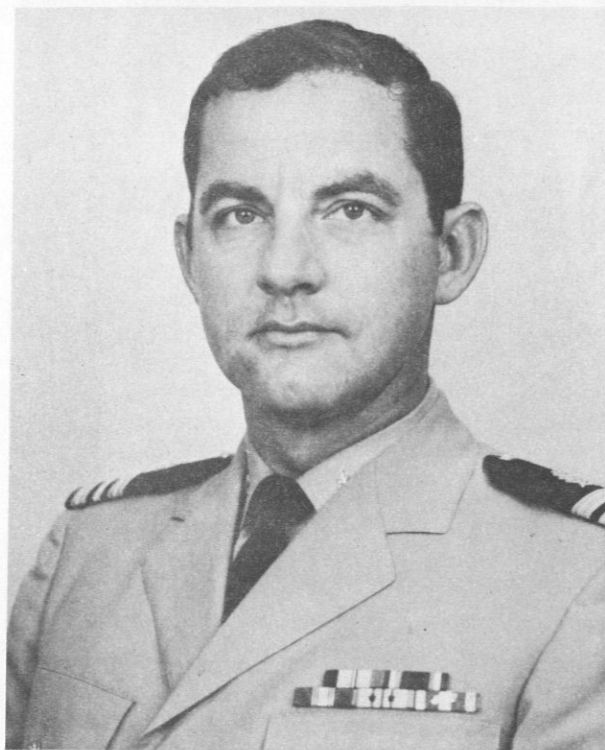
Pictured left to right on page 51: CAPT W. C. Wohlfarth, Jr., DC, USN, Commanding Officer, Naval Dental School; Dr. John S. Zapp, Commencement Speaker; RADM E. C. Raffetto, DC, USN, Assistant Chief of the Bureau of Medicine and Surgery (Dentistry) and Chief, Dental Division.

LCDR Oscar B. Walker, of Bethesda, Md., re-

ceived the Naval Dental School Award for Achievement in Research Methods. Established in 1966, the research award is presented each year to recognize the highest achievement in applying research methods to a scientific study. Award winners are selected from the class of 32 first-year-graduate-level students, all of whom participate in scientific research projects throughout the academic year. Features considered are selection and definition of the problem, the method used to solve it, the data collected, and the conclusion or solution presented. Dr. Walker's project has the somewhat formidable title "Dimensional Changes with Equi-Spansion Casting." Simply stated, he compared a new method of casting metal with two methods traditionally used, to determine which produced better-fitting inlays and crowns. The new method and the method now used proved to be equally accurate.

Dr. Walker has been assigned to duty at the Naval Air Station, North Island, Calif.

LCDR Richard B. McCoy, DC, USN, of Rockville, Md., received the Commanding Officer's Award for Excellence in Operative Dentistry, at the Naval Dental School, Bethesda, Md. This award was established in 1959 to emphasize the importance of operative dentistry in the Navy. It is presented each year to the student officer of the graduate-level courses conducted at the Naval Dental School, whose clinical



work and academic standing demonstrate the highest level of skill in operative dentistry, the "general practice" of the dental profession.

Dr. McCoy will remain at the Naval Dental School for duty on the staff of the Operative Dentistry Department.—PAO, NNMC, Naval Dental School, Bethesda, Md. ☛

NEW MEDICAL RESEARCH LABORATORY

Open House with a "cake cutting" was scheduled for 10 a.m. July 1, 1970 in recognition of the establishment of the Naval Aerospace Medical Research Laboratory, Pensacola, Fla. The unit is a component of the Naval Aerospace Medical Center under the command of the Naval Aerospace Medical Institute. RADM Edward P. Irons, MC, USN, Center Commanding Officer, introduced CAPT Newton W. Allebach, MC, USN, as the first officer-in-charge of the Naval Aerospace Medical Research Laboratory.



CAPT Newton W. Allebach, MC, USN

The new organization was established primarily to facilitate funding research in aerospace medicine and to separate the research functions from the training and support functions of the Institute. The Institute will provide logistic support for the Laboratory to

preclude the need for additional military and civilian personnel.

CAPT Marvin D. Courtney, MC, USN, will continue to command the Naval Aerospace Medical Institute. The Institute will carry on the training programs established 31 years ago to provide qualified flight surgeons, aerospace physiologists and psychologists, and physiology and medical technicians for units throughout naval aviation. The Institute will continue to provide professional and consultation services, aiding the Naval Air Training Command by conducting aviation physical examinations and providing aerospace physiology training. The Institute will also conduct the Special Board of Flight Surgeons which evaluates naval aviators/Navy flight officers to determine their fitness to continue in a flying status.

CAPT Allebach will direct the research formerly conducted at the Institute, which will be continued by the same investigators as previously. Some of the researchers such as Dr. Ashton Graybiel, Dr. Dietrich E. Beischer, and Dr. Herman J. Schaefer, have been associated with the Institute for several decades and will continue their work which has brought them high esteem in the world's scientific community, and many awards for their outstanding achievements in aerospace medicine.

CAPT Allebach is from Charleston, W. Va. He is an alumnus of Phillips Exeter Academy, Harvard College, College of Physicians and Surgeons at Columbia University, and the former Naval School of Aviation Medicine where he was designated a flight surgeon in 1953.

CAPT Allebach interned at Lakeside Hospital, Western Reserve University in 1945. His residencies include Medicine and Pathology at Roosevelt Hospital, N.Y. in 1947 and 1948; Chest Medicine at Bellevue Hospital, N.Y. in 1949, and Internal Medicine at Columbia Division of Bellevue Hospital in 1950.

The head of the new laboratory has been a diplomate of the American Board of Internal Medicine since 1955. He is a fellow of the American College of Cardiology; a fellow of the Aerospace Medical Association; a member of the American Heart Association, and the Florida Heart Association; and a member of the board of directors of the West Florida Heart Association. His new assignment follows one on the staff of the Institute where he headed Professional Services and was Chief of the Internal Medicine Division. He conducted research in cardiology sponsored by the National Aeronautics and Space Administration.

The new laboratory will continue to occupy the same buildings and spaces occupied by the Research Department of the Institute.—PAO, Naval Aerospace Medical Center, Pensacola, Fla. ☸

CHRISTMAS NOT THE SAME WITHOUT CHILDREN

*By LCPL William McClellan, USMC.
Photo by LCPL J. A. Fulgham, USMC.*

"The Christmas season didn't seem the same without any children around so I decided to spend my off-duty hours visiting orphanages around the DaNang area," explained Petty Officer First Class Ronald A. Myers (Compton, Calif.). But the trips to the orphanages soon became more than a pleasant way to pass the time. "I found myself becoming involved with kids. The thing that impressed me the most was how cheerful the kids always seemed," the dental



Although five year old Nguyet understands very little English, she smiles her approval as her new father Navy Petty Officer First Class Ronald A. Myers discussed plans of their flight to the U.S. One of the Sisters at Sacred Heart Orphanage who helped arrange the adoption also seems pleased with the plans.

technician serving with the 1st Marine Aircraft Wing stated.

The end of the holiday season did not diminish PO1 Myers' interest in the children. His wife and two sons began sending packages of fruit and clothing to him for the orphans.

"Early in January I thought about adopting a girl. I wrote my wife and sons to see how they felt about it and they wrote back and said it was a wonderful idea. In fact, they were so enthusiastic that they asked about the possibility of adopting two girls," he laughed. Even with his family's wholehearted approval, two problems concerned PO1 Myers. First, he had to find a suitable child and then begin the legal paperwork that he had heard was difficult and time consuming.

Three weeks of just searching for "the right girl" proved fruitless. "I was starting to get a little bit discouraged. Then one of the Sisters at Sacred Heart Orphanage showed me Nguyet (NOI-ET) and I knew I had found a girl who would fit in with my family," DN1 Myers recalled.

The legal paperwork involved with adoption also proved to be a pleasant surprise. "A Navy chaplain who had handled adoption cases before suggested a Vietnamese lawyer and he explained the process to me. From the time I sent for necessary documents about me, it took roughly about two months for the adoption to be final," he explained.

Nguyet knows very little English, but her new father is in no hurry for her to learn while she is in Vietnam. "She is only five years old and hasn't learned any formal Vietnamese. In fact she does not know how to read or write yet, so when she starts learning English, she will have nothing to 'unlearn'," he commented. "If she does have any trouble learning English when we get to the states, I'll get her a tutor. But with two brothers and a mother to help her I anticipate no real problem," he added.—PAO, 1st Marine Aircraft Wing, Military Assistance Command, Vietnam. ☸

MERITORIOUS UNIT COMMENDATION TO FIRST DENTAL COMPANY, FIRST MARINE DIVISION

The officers and men of the First Dental Company, First Marine Division (Reinforced), FMF, Pacific, received the Meritorious Unit Commendation "for exceptionally meritorious service in support of the First Marine Division in action against enemy Viet Cong insurgents and North Vietnamese Army forces from 23 March 1966 to 31 March 1969." Constantly

striving to bring dental care to units wherever deployed, the First Dental Company established a reputation as a highly flexible, mobile force. "It showed great ingenuity and initiative by creating dental facilities out of empty shells of buildings and even out of M-105 cargo trailers, which proved their worth in ensuring mobile support." Company personnel logged thousands of land and air miles over hazardous roads and into hostile areas, operated secondary aid stations, assisted in rescue and medical evacuation operations, and worked side by side with medical personnel in caring for the sick and wounded. The following dental officers served as Commanding Officers of the First Dental Company during the period for which the commendation was presented:

April 1966-May 1967, CAPT Peter C. Conglis, Retired.

May 1967-May 1968, CAPT Thomas J. Pape
July 1968-July 1969, CAPT John W. Pentecost. ☸

LT SIRE TO PARTICIPATE IN DERMATOLOGY FORUM

LT David J. Sire, MC, USN has been selected to appear on the Academy of Dermatology Residents' Forum to be held at the Palmer House in Chicago, Ill. on December 7, 1970. Dr. Sire will present a paper on "Benign Familial Chronic Pemphigus Treated with Dapsone". The College of Physicians of Philadelphia will award its first annual Stelwagon Prize to the resident adjudged to present the most outstanding paper at this Forum.

LT Sire is presently a member of the staff at Naval Hospital, Philadelphia, Pa. ☸

AMERICAN SPECIALTY BOARDS

The following officers of the Naval Dental Corps have recently met the requirements for certification as Diplomates of the respective American Specialty Boards:

American Board of Oral Surgery

CAPT Paul L. Abbott, DC, USN
CDR Ollie V. Hall, Jr., DC, USN
CDR Elgene G. Mainous, DC, USN

American Board of Prosthodontics

CAPT Marvin Carmen, DC, USN
CDR John A. McKinnon, Jr., DC, USN
CDR Dorsey J. Moore, DC, USN
CDR Thomas L. Whatley, DC, USN

CDR Noel D. Wilkie, DC, USN
CDR O. L. Shoemaker, DC, USN
LCDR Richard G. Preece, DC, USN

American Board of Periodontics

CDR Ernest T. Witte, DC, USN

American Board of Endodontics

CDR Ronald N. Dodds, DC, USN ☸

ERRATUM

In the June issue of the Navy Medical Newsletter, Volume 55, No. 6, Page 8, USS Haven (AH-13) should have read USS Haven (AH-12). ☸

IN MEMORIAM

CAPT Robert Rogers Fowler, MC, USN, died of cancer in Hattiesburg, Miss. on June 4, 1970. Born in New Orleans, La. on June 28, 1930, CAPT Fowler graduated from Louisiana State University Medical School in 1952. He completed training in Aviation Medicine in 1954 and specialized in Obstetrics and Gynecology. His last duty assignment prior to his death was on the staff at Naval Reserve Training Command in Omaha, Nebraska.

CAPT George M. Bell, MC, USN, Retired, died of cardiac arrest in Key West, Fla., on June 11, 1970. Born in Ashland, Ky. on November 29, 1906, CAPT Bell graduated from University of Louisville Medical School in 1932. He entered into naval service on November 1, 1941, and was board certified in General Surgery. His last duty assignment was on the staff at Naval Station Long Beach, Calif., and Dr. Bell had retired from service in June 1959.

CAPT John Joseph O'Malley, MC, USN, Retired, died of congestive heart failure at the Naval Hospital in Bethesda, Md., on June 12, 1970. Born in Avoca, Pa. in 1881, he received his medical degree from the College of Physicians and Surgeons in Baltimore and was commissioned in the Navy as a Surgeon in 1910. Prior to his retirement in 1945, CAPT O'Malley commanded naval hospitals in Pensacola, Fla.; Norfolk, Va.; and in Jacksonville, Fla. Having resided in Washington, D.C. for the past 25 years, Dr. O'Malley was a Fellow of the American College of Surgeons and a long-standing member of the Army-Navy Country Club. He is survived by his wife, two daughters, two sisters, and six grandchildren.

LCDR Donald Ernest Sampon, MC, USN, died on June 21, 1970 at NAS Point Mugu, Calif., as a result of an aircraft accident. Born in Lincoln, Neb.

on June 20, 1937, LCDR Sampon received his medical degree from Northwestern University Medical School in 1963. A naval aviator and flight surgeon, he had been assigned to duty in Experimental Test Squadron-Four at NAS, Pt. Mugu, prior to his death.

LT Benjamin Franklin Dixon, HC, USN, Retired, died at his home in San Diego on June 27, 1970. Known to two generations of Medical Department personnel as "Uncle Ben", he was born in Kahoka, Mo. on March 23, 1892; he enlisted in the Hospital Corps in 1917 and transferred to the Fleet Naval

Reserve in 1937. Recalled to active duty in 1941, he was subsequently commissioned a lieutenant in the Hospital Corps. LT Dixon was in charge of the Hospital Corps Archives during World War II and served as one of the editors of the Hospital Corps Quarterly. After retirement in 1947, he returned to school and earned a BA degree in History which he then taught for 11 years in the San Diego Adult Evening School System. He was also Curator of Junipers Serra Museum in San Diego during that time. LT Dixon will be profoundly missed by a devoted family, students, and those shipmates who have survived him. ☸

(Continued from p. 39)

stalled to permit setting up emergency surgical facilities in a portion of the berthing area. Another attractive possibility is to have operating rooms, X-ray, laboratory, central supply—and perhaps intensive care—in the tank deck area. Modular units of the Army "MUST" system could be adapted to ship-board use. When folded, the units occupy only an 8 x 12 foot space—when opened they provide a unit floor area of 12 x 17 feet. A set of these units could be carried aboard for the use of a Navy surgical team or it could be the landing outfit for a USMC "clearing" platoon or company. If the latter scheme is selected, the USMC surgical unit could operate aboard

the LST until required ashore—then refold the modular unit and transfer ashore.

Several prototype modular units suitable for ship-board or shore use have been developed and tested by the Naval Medical Research Institute. Others are under development by the Naval Medical Field Research Laboratory. Close working arrangements between BUMED, Naval Ship Systems Command, and the operating forces have been established to maximize the potential of these new vessels in the medical support role. The LST(H) may once again become a significant element in fleet medical support for the landing force. ☸

(Continued from p. 43)

Paul, Kathryn Ellen, Phillip Loring, Stephen Barnet, Christopher Alan, and Matthew Stuart Waite.

CAPT Waite is assistant Clinical Professor of Pediatrics at Georgetown University and a former Instructor in Pediatrics at the University of Pennsylvania Medical School. He is a Fellow of the American Academy of Pediatrics and the American College of Physicians, and a member of the American Medical Association, Walter Reed Society, Society of Mili-

tary Surgeons, Industrial Medical Association, Aerospace Medical Association, and the Undersea Medical Society. He has written numerous papers in the field of pediatrics and was the subject of an article in the Saturday Evening Post concerning human guinea pigs and the Walter Reed Society. He received the E. Mead Johnson Award in Pediatrics in 1946, and the Medical Society of the District of Columbia Award for Pediatrics Exhibit in 1957. Among his friends and associates, CAPT Waite is also recognized as an accomplished artist. ☸

(Continued from p. 45)

Mantoux methods. Using an index of 10 mm as the dividing line between positive reactors and negative reactors, 180 patients were tuberculin negative in the standard Mantoux group, and 771 were negative in the jet-injector group; a discrepancy of 591 cases or 47% of the 1,298 patients with 10 mm or greater induration using standard Mantoux techniques.

These four studies and similar ones have been the basis of our disapproval of the jet gun method for skin testing.

Dr. Mock's interest in this most important area of Preventive Medicine is most appreciated. ☸

United States Navy Medical Newsletter

CORRESPONDENCE AND CONTRIBUTIONS from the field are welcomed and will be published as space permits, subject to editing and possible abridgment. All material should be submitted to the Editor, Navy Medical Newsletter, Code 38, Bureau of Medicine and Surgery, Washington, D.C. 20390.

NOTICES should be received not later than the third day of the month preceding the month of publication.

PROFESSIONAL PAPERS AND ARTICLES should be typewritten on one side of the paper, double spaced, with liberal margins. Original and one carbon copy are required. Generic names of drugs are preferred. If the author's present affiliation differs from that under which the reported work was done, both should be given. Unless otherwise indicated, it will be assumed that the article presented has not been previously printed or delivered elsewhere. Papers which have been delivered or printed elsewhere, covered by copyright, cannot be reprinted in the Newsletter without the written permission of the author(s) and copyright holder. It is the responsibility of the author(s) to inform the Newsletter when the material submitted has been previously used or copyrighted. The Newsletter will be happy to request permission to reprint from the copyright holder when this is necessary.

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SUGGESTIONS are invited concerning the Newsletter, its content and form. Comments should be forwarded to the Editor.

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